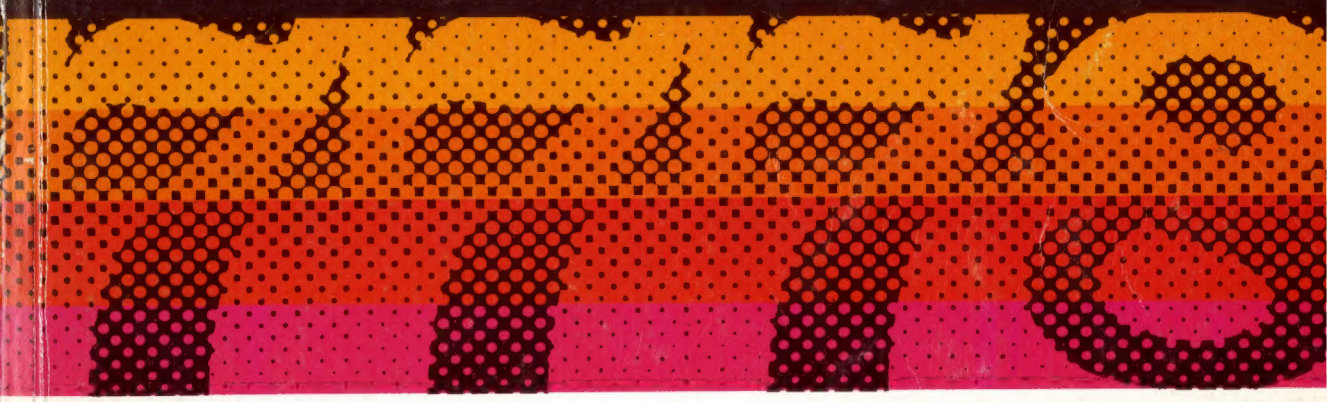
Undergraduate Calendar

concordia university

Concordia University 1977-78



Incorporating
Sir George Williams University
and Loyola of Montreal

JANUARY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

FEBRUARY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

MARCH

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

APRIL

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

MAY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

JUNE

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

JULY

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

AUGUST

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

SEPTEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

OCTOBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

NOVEMBER

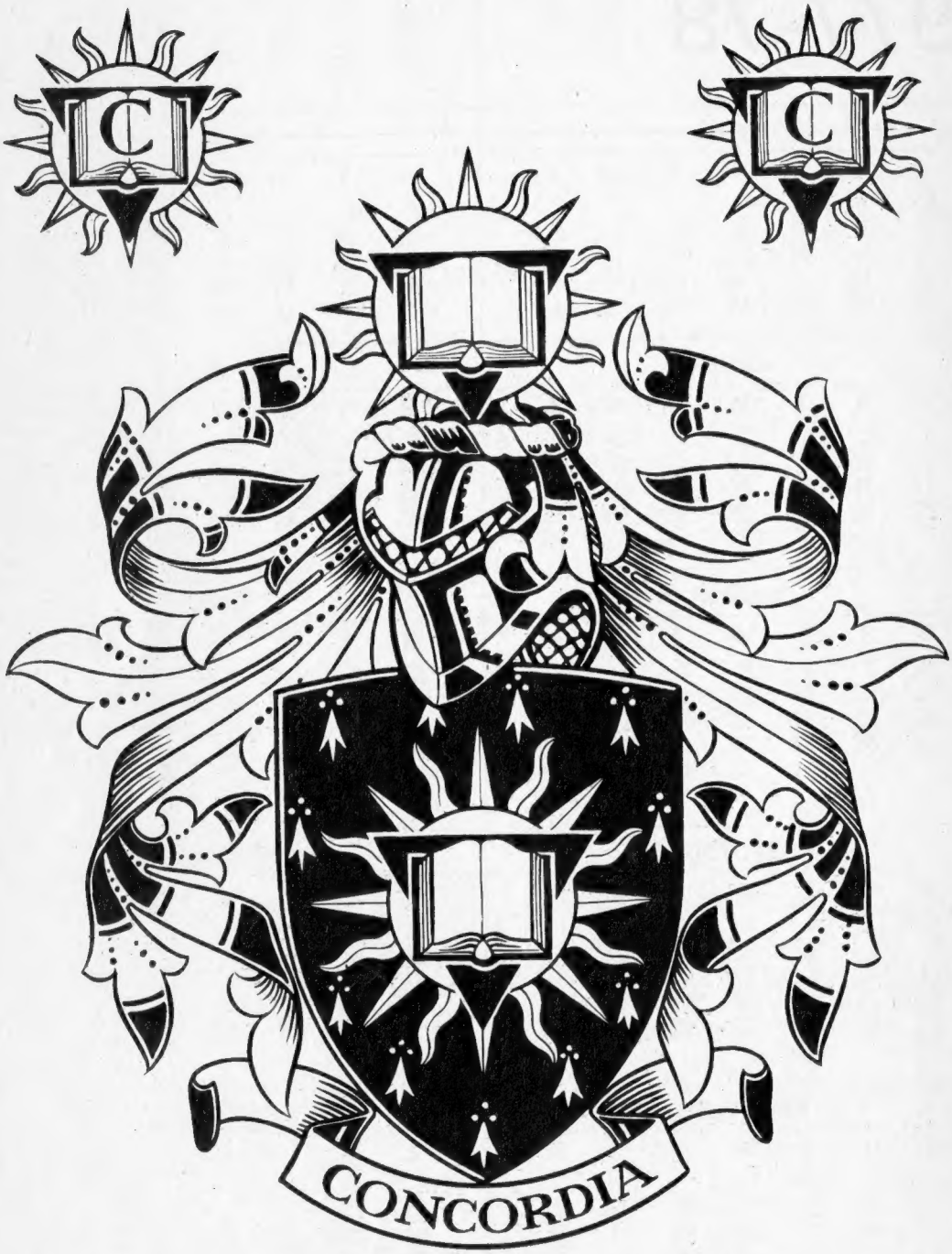
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

DECEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

1977

Concordia University 1977-78


CONCORDIA

Concordia

Concordia University was established in August, 1974. Its two founding components, Sir George Williams University and Loyola College, share a tradition of service to part-time students, and Concordia continues to build on this expertise within the Quebec university system.

The University also serves a large full-time student population which accounts for nearly half of Concordia's undergraduate enrolment. A principal goal of the University remains excellence in undergraduate teaching.

The University offers numerous graduate programmes for both full-time and part-time students and in fact pioneered in the field of part-time graduate study, offering programmes in the late afternoon to accommodate working people.

Concordia's name reflects the University's place in Montreal. It is drawn from the city's motto "concordia salus". The University has two campuses. Sir George Williams campus, located in the heart of Montreal, is grouped around the Hall Building at 1455 de Maisonneuve Boulevard West and is often thought of as a 'sidewalk' campus.

Loyola campus, situated in the west end of the city at 7141 Sherbrooke Street West, is a large green campus. Its principal buildings were built in a Tudor and Early Renaissance style, partly inspired by buildings at St. Mary's College, Oxford, and the Royal Navy Academy in Osborne, England.

The University offers undergraduate degrees in six Faculties. The Faculty of Engineering, the Faculty of Commerce and Administration and the Faculty of Fine Arts give courses on both campuses. The other Faculties are: the Sir George Williams Faculty of Arts; the Sir George Williams Faculty of Science; the Loyola Faculty of Arts and Science. (The merger of science departments on both campuses into a single faculty is under discussion as this calendar is being prepared.)

The Master's degrees awarded by Concordia University are: Master of Arts, Master of Business Administration, Master of Computer Science, Master of Engineering, Master of Engineering (Building), Master of Fine Arts, Master of Science, Master in the Teaching of Mathematics. Doctorates are awarded in Administration, Chemistry, Economics, Engineering, History, Humanities, Psychology, Religion. The University also offers post-graduate diploma programmes in: Art Education, Communication Arts, Community Politics and the Law, Early Childhood Education, Ethics, History, Institutional Administration, Instructional Technology, Library Science, The Teaching of Mathematics, Theological Studies.

Enrolment in the 1976-77 academic year was:

full-time undergraduate students	9,400
part-time undergraduate students	11,880
graduate students	4,460
other, non-degree students	6,320

In addition to the programmes described in this Calendar and the Graduate Studies Calendar, the University offers a wide range of summer programmes on both campuses.

Libraries

The Concordia University Libraries contain a growing collection of approximately 800,000 items, which increase at an average rate of 65,000 items per year. There are two libraries on each campus and students may use facilities on both campuses. The annual *Library Owner's Manual* contains information on resources and services offered by the Concordia Libraries.

The Norris Library on the Sir George Williams campus is the largest of the libraries and contains a collection of books, microforms, periodicals, and non-print materials for students in all areas except those in science and technology. The Science and Engineering Library, in the Hall Building on the same campus, contains materials concerned with the pure and applied sciences. The Sir George Williams campus libraries have been designated a full depository for publications of the Canadian federal and Quebec governments, and also receive selected documents from a number of other provinces and countries. The bulk of this collection is located on the 5th floor of the Norris Library.

The Georges P. Vanier Library and the Drummond Science Library serve students and faculty on the Loyola campus. Resources include books, selected government documents of the province of Quebec, Canada and other countries; films and other non-print materials, microforms and periodicals.

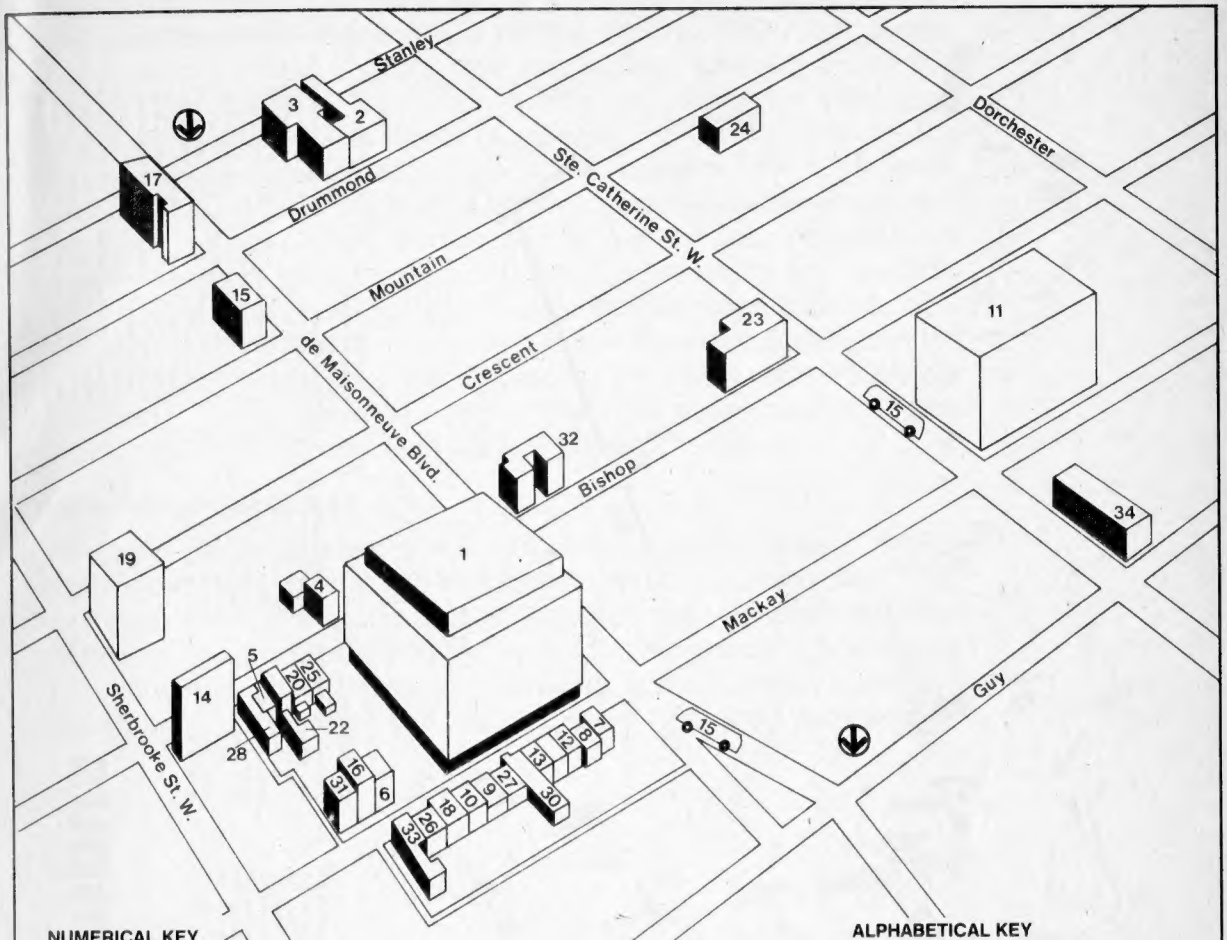
Laboratories

The University has 100 laboratories on both campuses with modern equipment for teaching and research in Biology, Chemistry, Physics, Engineering, Statistics, Psychology, Geography, Languages and Communication Studies.

Art Collection and Galleries

The Concordia University collection of art is housed on both campuses. Portions of the collection are displayed in public areas of the Loyola campus and in the galleries and display areas of the Sir George Williams campus. The collection comprises an extensive survey of modern Canadian paintings, drawings, graphic art, sculpture and minor art.

There are three art galleries: The Weissmann Gallery, Gallery One and Gallery Two, located on the mezzanine floor of the Henry F. Hall Building. There are also open display areas on the same floor. There is a continuous programme of outside exhibitions and shows by students and faculty throughout the academic year. On occasion the galleries are also used for concerts, guest lectures and other cultural events.



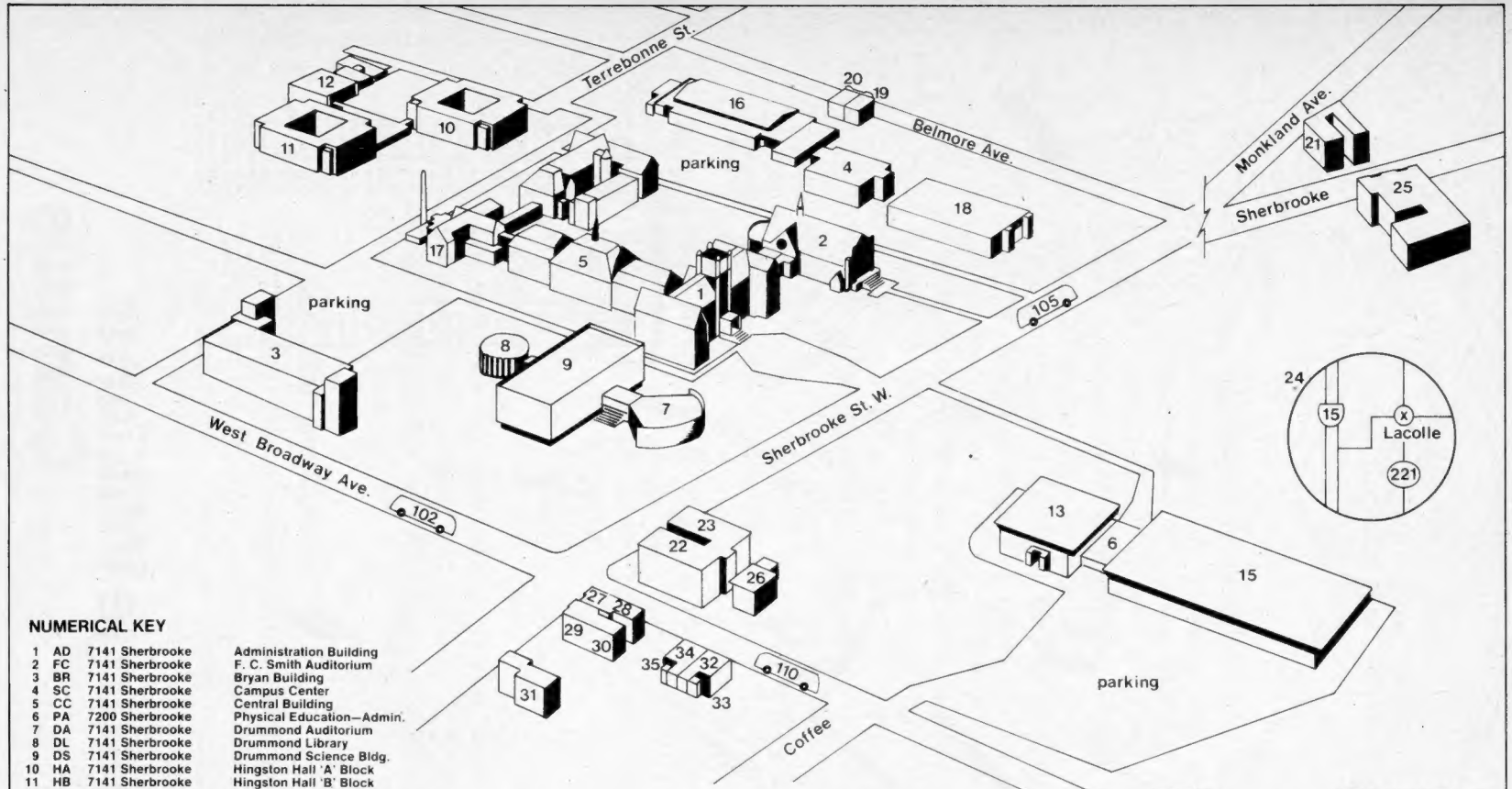
NUMERICAL KEY

1	H	1455 de Maisonneuve	Henry F. Hall
2	N	1435 Drummond	Kenneth E. Norris
3	Y	1441 Drummond	Y.M.C.A.
4	F	2085 Bishop	Annex F
5	B	2160 Bishop	Annex B
6	M	2135 Mackay	Annex M
7	Q	2010 Mackay	Annex Q
8	P	2020 Mackey	Annex P
9	X	2080 Mackay	Annex X
10	Z	2090 Mackay	Annex Z
11	C	1440 St. Catherine	Annex C
12	T	2030 Mackay	Annex T
13	R	2050 Mackay	Annex R
14	A	1420 Sherbrooke	Annex A
15	L	2015 Mountain	Shuchat
16	S	2145 Mackay	Annex S
17	E	2015 Drummond	Annex E
18	V	2110 Mackay	Annex V
19	G	1374 Sherbrooke	Annex G
20	D	2140 Bishop	Annex D
21	J	1650 Lincoln	Annex J
22	K	2150 Bishop	Annex K
23	SA	1405 Bishop	Coronation
24	MF	1230 Mountain	Bourget School
25	CE	2120 Bishop	Annex CE
26	PR	2100 Mackay	Annex PR
27	EN	2070 Mackay	Annex EN
28	MU	2170 Bishop	Annex MU
29	DC	2305 ST. Mark	Day Care Center
30	FA	2060 Mackay	Annex FA
31	CI	2149 Mackay	Annex CI
32	BC	1463 Bishop	Bishop Court
33	AR	2130 Mackay	Annex AR
34	BE	1249-59 Guy	Building Research Center

ALPHABETICAL KEY

Annex A	1420 Sherbrooke	14
Annex AR	2130 Mackay	33
Annex B	2160 Bishop	5
Annex C	1440 St. Catherine	11
Annex CE	2120 Bishop	25
Annex CI	2149 Mackay	31
Annex D	2140 Bishop	20
Annex E	2015 Drummond	17
Annex EN	2070 Mackay	27
Annex F	2085 Bishop	4
Annex FA	2060 Mackay	30
Annex G	1374 Sherbrooke	19
Annex J	1650 Lincoln	21
Annex K	2150 Bishop	22
Annex M	2135 Mackay	6
Annex MU	2170 Bishop	28
Annex P	2020 Mackay	8
Annex PR	2100 Mackay	26
Annex Q	2010 Mackay	7
Annex R	2050 Mackay	13
Annex S	2145 Mackay	16
Annex T	2030 Mackay	12
Annex V	2110 Mackay	18
Annex X	2080 Mackay	9
Annex Z	2090 Mackay	10
Bishop Court	1463 Bishop	32
Bourget School	1230 Mountain	24
Building Research Ctr.	1249-59 Guy	34
Coronation	1405 Bishop	23
Day Care Center	2305 St. Mark	29
Henry F. Hall	1455 de Maisonneuve	1
Kenneth E. Norris	1435 Drummond	2
Shuchat	2015 Mountain	15
Y.M.C.A.	1441 Drummond	3

Sir George Williams Campus



NUMERICAL KEY

1	AD	7141 Sherbrooke	Administration Building
2	FC	7141 Sherbrooke	F. C. Smith Auditorium
3	BR	7141 Sherbrooke	Bryan Building
4	SC	7141 Sherbrooke	Campus Center
5	CC	7141 Sherbrooke	Central Building
6	PA	7200 Sherbrooke	Physical Education—Admin.
7	DA	7141 Sherbrooke	Drummond Auditorium
8	DL	7141 Sherbrooke	Drummond Library
9	DS	7141 Sherbrooke	Drummond Science Bldg.
10	HA	7141 Sherbrooke	Hingston Hall 'A' Block
11	HB	7141 Sherbrooke	Hingston Hall 'B' Block
12	HC	7141 Sherbrooke	Hingston Hall 'C' Block
13	PG	7200 Sherbrooke	Physical Education—Gym.
15	PE	7200 Sherbrooke	Physical Education—Rink
16	PS	7141 Sherbrooke	Physical Services Bldg.
17	RF	7141 Sherbrooke	Refectory Building
18	VL	7141 Sherbrooke	Vanier Library
19	BH	3500 Belmore	Belmore House
20	BB	3502 Belmore	Belmore Building
21	CH	6931-37 Sherbrooke	Centennial Building
22	CL	7282 Sherbrooke	Cloran Building
23	HK	7270 Sherbrooke	Hackett Building
24	LC	Lacolle, P.Q.	Lacolle Center
25	LH	6900 Sherbrooke	Langley Hall
26	WB	2499/2501 West Broadway	Annex WB
27	RA	7300 Sherbrooke	Annex RA
28	RB	7302 Sherbrooke	Annex RB
29	RC	7306 Sherbrooke	Annex RC
30	RD	7308 Sherbrooke	Annex RD
31	RG	7328 Sherbrooke	Annex RG
32	WC	2490 West Broadway	Annex WC
33	WD	2492 West Broadway	Annex WD
34	WE	2494 West Broadway	Annex WE
35	WF	2496 West Broadway	Annex WF

ALPHABETICAL KEY

Administration Building	7141 Sherbrooke	1
Annex RA	7300 Sherbrooke	27
Annex RB	7302 Sherbrooke	28
Annex RC	7306 Sherbrooke	29
Annex RD	7308 Sherbrooke	30
Annex RG	7328 Sherbrooke	31
Annex WB	2499/2501 W. Broadway	26
Annex WC	2490 W. Broadway	32
Annex WD	2492 W. Broadway	33
Annex WE	2494 W. Broadway	34
Annex WF	2496 W. Broadway	35
Belmore Building	3502 Belmore	20
Belmore House	3500 Belmore	19
Bryan Building	7141 Sherbrooke	3
Campus Center	7141 Sherbrooke	4
Centennial Building	6931-37 Sherbrooke	21
Central Building	7141 Sherbrooke	5
Cloran Building	7282 Sherbrooke	22
Drummond Auditorium	7141 Sherbrooke	7
Drummond Library	7141 Sherbrooke	8
Drummond Science Building	7141 Sherbrooke	9
F. C. Smith Auditorium	7141 Sherbrooke	2
Hackett Building	7270 Sherbrooke	23
Hingston Hall 'A' Block	7141 Sherbrooke	10
Hingston Hall 'B' Block	7141 Sherbrooke	11
Hingston Hall 'C' Block	7141 Sherbrooke	12
Lacolle Center	Lacolle, P.Q.	24
Langley Hall	6900 Sherbrooke	25
Physical Education—Admin.	7200 Sherbrooke	6
Physical Education—Gym.	7200 Sherbrooke	13
Physical Education—Rink	7200 Sherbrooke	15
Physical Services Building	7141 Sherbrooke	16
Refectory Building	7141 Sherbrooke	17
Vanier Library	7141 Sherbrooke	18

Loyola Campus

Theatre, Music and Arts Studios

The Faculty of Fine Arts operates the Douglass Burns Clarke Theatre located in the Hall Building. It is a modern facility seating 380 people, and is used primarily for dramatic productions and musical performances. The 650-seat F. C. Smith Auditorium, located on the Loyola campus, is used for a wide variety of activities, including cinema, theatre and music performances. On the same campus, the Chameleon Theatre, a flexible teaching theatre facility, serves the theatre students.

Most of the specialized studios and workshops for undergraduate students are in the Hall Building or in the surrounding downtown area. The graduate studios are located in a separate downtown building.

Music students use ensemble rooms in the Refectory Building on the Loyola campus where a number of practice studios of various sizes are maintained. Performances are held in the large ensemble rooms and, occasionally, in the Chapel or in the D.B. Clarke Theatre.

Audio-visual Facilities

The Audio-visual Department has offices on both campuses, through which access can be arranged to the common pool of resources. These include television and sound studios, language laboratories, distribution centres for equipment and supplies, units for the production of materials in film, graphics, photography, TV and audio, and a visual media service specializing in the research and procurement of films and videotapes.

Table of Contents

Not all courses listed in this Calendar are offered in 1977-78. Students are advised to consult the Registration Handbook, issued at Registration, for a time-table of courses offered.

Academic Calendar **11**

Governors, Senate, Councils, Faculty, Staff **12**

Admission Regulations **13**

Mature Student Programme **14**

Tuition and Fees **15**

Academic Regulations **16**

Medals And Prizes **17**

Student Services **18**

Student Associations **19**

Centre For Continuing Education **20**

Programmes of Particular Interest To Teachers **21**

Sir George Williams Faculty of Arts **41**

Sir George Williams Faculty of Arts 41.1
Curriculum for the Degree of Bachelor of Arts 41.2
Degree Requirements 41.3
Programmes 41.4
The Centre for Interdisciplinary Studies 41.5
Centre for the Teaching of English as a Second Language 41.6
Journalism 41.7
Department of Classics, Modern Languages and Linguistics 41.8
Department of English 41.9
Department of French 41.10
Mathematics (Faculty of Science, SGW) 41.11
Department of Philosophy 41.12
Department of Religion 41.13
Department of Applied Social Science 41.14
Department of Economics 41.15
Department of Education 41.16
Department of Geography 41.17
Department of History 41.18
Department of Political Science 41.19

Department of Psychology 41.20
Department of Sociology and Anthropology 41.21

Loyola Faculty of Arts and Science **51**

Loyola Faculty of Arts & Science 51.1
Admission Requirement 51.2
Andragogy 51.3
Department of Biology 51.4
Department of Bio-Physical Education 51.5
Department of Chemistry 51.6
Department of Classics 51.7
Department of Communication Studies 51.8
Department of Computer Science 51.9
Department of Economics 51.10
Department of English 51.11
Department d'Etudes Françaises 51.12
Geography 51.13
Department of Geology 51.14
Health Education 51.15
Department of History 51.16
Centre for Interdisciplinary Studies 51.17
Library Studies 51.18
Department of Mathematics 51.19
Department of Modern Languages and Linguistics 51.20
Department of Philosophy 51.21
Department of Physics 51.22
Department of Political Science 51.23
Department of Psychology 51.24
Department of Sociology 51.25
Department of Theological Studies 51.26

Faculty of Commerce and Administration **61**

Commerce and Administration 61.1
Admission Requirements 61.2
General Information 61.3
Accountancy 61.4
Administration 61.5
Finance 61.6
Management 61.7
Marketing 61.8
Quantitative Methods 61.9
Economics 61.10
Computer Science 61.11
Additional Courses for Commerce Students 61.12
Special Programmes in Accountancy 61.13
Special Certificate Programmes 61.14
Commerce & Administration Consultative Committee 61.15

Faculty of Engineering **71**

Faculty of Engineering 71.1
Bachelor of Engineering Programme 71.2
General Requirements 71.3
Department of Civil Engineering 71.4
Department of Electrical Engineering 71.5
Department of Mechanical Engineering 71.6
Course Descriptions 71.7
Department of Computer Science 71.8
Certificate Programme in Quality Control 71.9

Faculty of Fine Arts **81**

Faculty of Fine Arts 81.1
Admission Requirements 81.2
Degree Requirements 81.3
Programmes in Studio Arts 81.4
Studio Art I 81.5
Studio Art II 81.6
Art Education 81.7
Art History 81.8
Cinema 81.9
Theatre Arts 81.10
Music 81.11

Sir George Williams Faculty of Science **91**

Sir George Williams Faculty of Science 91.1
Admission Requirements 91.2
Degree Requirements 91.3
Programmes of Study 91.4
Faculty Advisers 91.5
Department of Biological Sciences 91.6
Department of Chemistry 91.7
Computer Science 91.8
Economics 91.9
Department of Geography 91.10
Department of Geology 91.11
Department of Mathematics 91.12
Department of Physics 91.13
Psychology (BSc) 91.14
Teaching of Science 91.15

Equivalents Index **200**

11 Academic Calendar

11.1 ACADEMIC CALENDAR

The Academic Calendar is subject to change without notice. Effort will be made to publicize revisions.

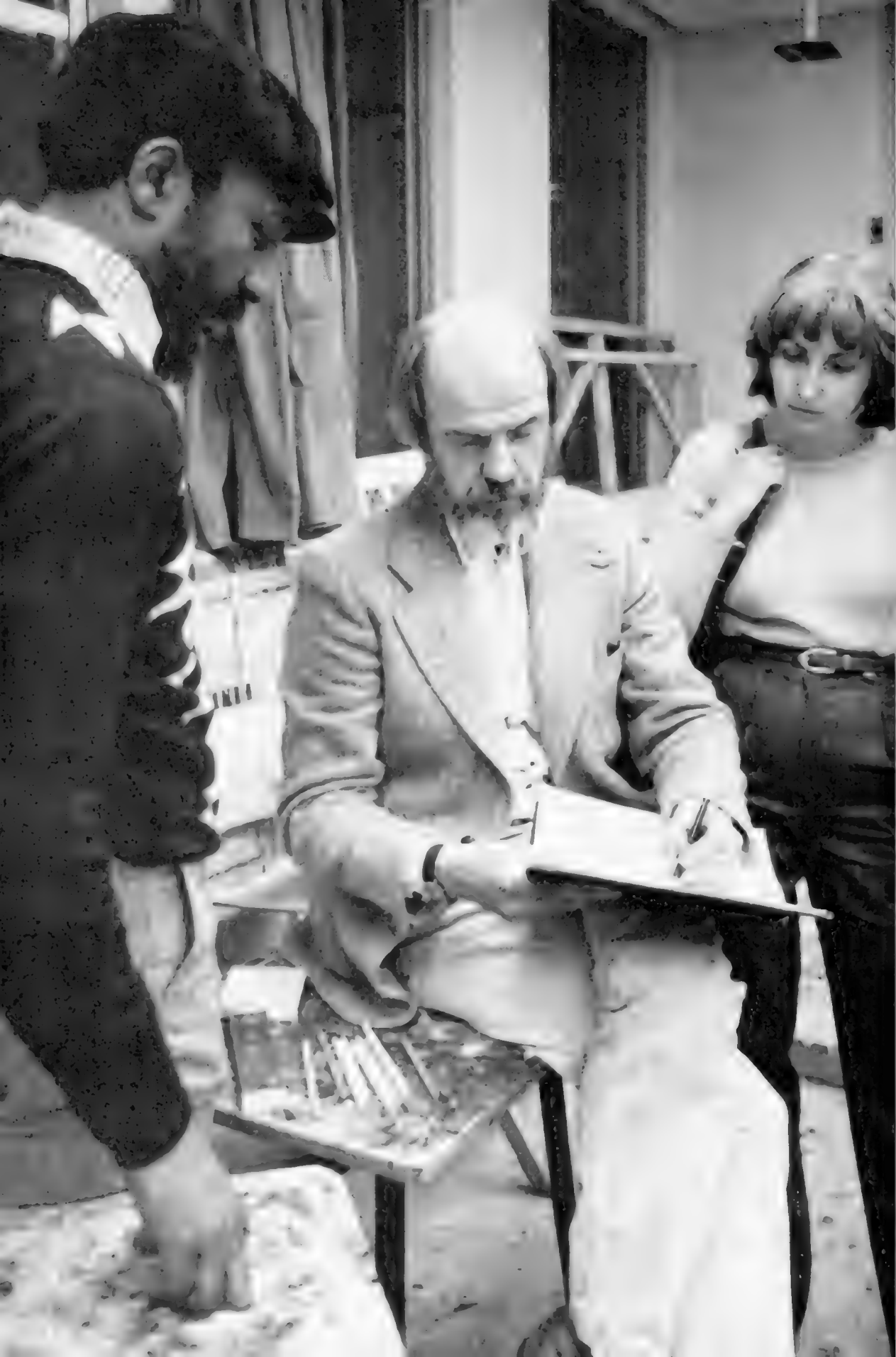
1977

MARCH	**Tuesday, March 1**	Last day for applications Full Time Day Winter Session (1977/78) Course selection (Pre-Registration) begins Specific dates for each faculty to be published at a later date.
APRIL	**Friday, April 22**	Last day for applications Summer Session 1977
MAY	**To Be Announced**	Evening Summer Session Registration
	Monday, May 9	Classes begin — Evening Summer Session — Course change period begins.
	Thursday, May 12	Course change period ends — Evening Summer Session.
JUNE		SPRING CONVOCATION
	Sunday, June 5	Loyola Faculty of Arts and Science
	Tuesday, June 7	Faculty of Fine Arts
	Wednesday, June 8	Faculty of Engineering
	Thursday, June 9	Sir George Williams Faculty of Science
	Saturday, June 11	Faculty of Commerce and Administration
	Sunday, June 12	Sir George Williams Faculty of Arts
	To Be Announced	Day Summer Sessions
	Tuesday, June 7	Classes end — first term courses — Evening Summer Session.
	Thursday, June 9	Classes begin — second term courses — Evening Summer Session — Course change period begins.
	Tuesday, June 14	Course change period ends — second term courses — Evening Summer Session.
	Thursday, June 15	Last day for submission of Preregistration forms — Fall/Winter Session 1977.
	Thursday, June 16	Last day for special and supplemental examination applications
JULY		
	Thursday, July 7	Classes end — Evening Summer Session.
	Monday, July 11	Examinations begin — Evening Summer Session.
	Friday, July 15	Examinations end — Evening Summer Session.
AUGUST	**Monday, August 1**	Special and supplemental examinations begin — Winter Session 1976/77
	Wednesday, August 10	Special and supplemental examinations end — Winter Session 1976/77
	Friday, August 12	Last day for applications — Evening Session 1977/78
	Thursday, August 18	Registration for Pre-Registered students begins
	Monday, August 22	Registration for Pre-Registered students ends
	Thursday, August 25	General Registration begins (specific dates to be published in the time-tables)

SEPTEMBER	**Monday, September 5**	Labour Day
	Tuesday, September 6	General Registration ends
	Wednesday, September 7	Classes begin — Day and Evening Winter Session — Course change period begins
	Tuesday, September 20	Course change period ends
OCTOBER	**Monday, October 3**	Last day for applications — Special and supplemental examinations for Summer Session
	Monday, October 10	Thanksgiving Day — No classes day and evening
	Saturday, October 29	Special and supplemental examinations — Summer Session
NOVEMBER	**Tuesday, November 1**	Last day for academic withdrawal from first term courses
	Friday, November 11	Last day for applications — January entry
	To Be Announced	Fall Convocation
DECEMBER	**Wednesday, December 7**	Last day of classes — First term
	Thursday, December 8	Examination period begins
	Thursday, December 22	Examination period ends
	To Be Announced	Registration for January entry

1978

JANUARY	**Tuesday, January 3**	Course change period begins for courses offered only in the second term
	Monday, January 9	Classes begin — Second term
	Friday, January 13	Course change period ends
FEBRUARY	**Wednesday, February 1**	Last day for applications for first term supplemental and special examinations — Graduating students
	Saturday, February 25	First term supplementals and special examinations — Graduating students
	Tuesday, February 28	Last day for academic withdrawal from full courses and second term courses
MARCH	**Friday, March 24**	Good Friday — University closed
	Monday, March 27	Easter Monday — University closed
APRIL	**Saturday, April 8**	Last day of classes
	Saturday, April 8	Final examinations begin
	Wednesday, April 26	Final examinations end
JUNE		SPRING CONVOCATION
	Sunday, June 4	Loyola Faculty of Arts and Science
	Tuesday, June 6	Faculty of Fine Arts
	Wednesday, June 7	Faculty of Engineering
	Thursday, June 8	Sir George Williams Faculty of Science
	Saturday, June 10	Faculty of Commerce and Administration
	Sunday, June 11	Sir George Williams Faculty of Arts



12 Governors, Senate, Councils, Faculty, Staff

12.1 Governors, Senate, Councils, Faculty, Staff

12.1.1 BOARD OF GOVERNORS

Mr. H. J. Hemens, Q.C., *Chancellor*
Mr. C. A. Duff, *Chairman*
Mr. C. S. Malone, *Vice-Chairman*
Mr. E. A. Lemieux, *Vice-Chairman*
Mr. R. P. Duder, *Secretary*
Prof. J. Bordan
Mr. M. Bourgault
Mr. R. Coveduck
Mr. D. Dawson
Prof. A. Dickie
Rev. S. Drummond, S.J.
Rev. S. Dubas, S.J.
Mr. R. Evans
Rev. A. Graham, S.J.
Mr. R. L. Grassby
Mr. M. Horgan
Mr. F. Kerner
Mr. W. Kotiuga
Prof. S. Kubina
Prof. G. Martin
Mr. P. M. McEntyre
Prof. S. McEvenue
Mr. D. W. McNaughton
Dr. J. W. O'Brien
Rev. R. E. O'Connor, S.J.
Mr. A. Pascal
Prof. O. A. Pekau
Mr. J. J. Pepper, Q.C.
Mr. J. W. Tait
Prof. R. Wall
Mr. C. Wisniewski

12.1.2 CONCORDIA SENATE (1976/77)

Dr. J. W. O'Brien, *Chairman*
Prof. J. Bordan, *Vice-Chairman*
Mr. J. Noonan, *Secretary*
Dr. G. Adams
Mr. C. Ami
Dean A. Berczi
Dr. C. Bertrand
Prof. L. Bessner
Dean R. Breen
Prof. G. Brink
Mr. A. Bullard
Dean J. C. Callaghan
Dean I. L. Campbell
Dr. J. Chaikelson
Dr. M. Cohen
Dr. A. Deland
Dr. M. Despland
Dr. M. Douglass
Dr. H. Enesco
Dean S. French
Dr. D. Frost
Rev. A. Graham, S.J.
Prof. G. Gross
Mr. D. Heath
Dr. M. Hogben
Prof. A. Jordan
Mr. S. Kutukian
Prof. J. Locke
Mrs. J. Lowenstyn
Mr. A. McDonald
Dr. S. McDonough
Dr. S. McEvenue
Dr. J.D. McLaughlin
Prof. J. Moore
Dr. J. Ornstein
Dr. M. Osman
Dean A. Pinsky
Ms. R. Przestrzelski
Prof. G. Sheps
Dr. L. Smith
Prof. R. Smith
Dr. M. N. Swamy
Dean R. H. Verschingel
Prof. K. Waters
Dr. E. West
Prof. J. H. Whitelaw
Prof. G. D. Xistris
Twelve students to be named.

12.1.3 COUNCIL OF THE LOYOLA FACULTY OF ARTS AND SCIENCE

Dean Rev. Dr. R. Breen, *Chairman*
Dr. L. J. Sanders, *Secretary*
Dr. S. A. Alvi
Dean A. Audet
Prof. M. Baldwin
Ms. K. Barr

Dr. H. Bauer
Dr. A. Broes
Dr. E. Cameron
Prof. M. Catry-Verron
Prof. A. Costanzo
Rev. Dr. R. T. Cronin, S.J.
Dr. M. G. Decarie
Dr. G. Dewey
Prof. J. Doyle
Rev. Dr. M. S. Dubas, S.J.
Mr. M. Gallagher
Rev. A. Graham, S.J.
Prof. G. Gross
Dr. H. P. Habib
Dr. M. G. Hogben
Mr. M. Horgan
Mr. I. Katsof
Dr. G. C. Keilty
Dr. H. Kim
Dr. G. Laurion
Mr. R. Martin
Mr. J. R. McBride
Dr. S. E. McEvenue
Mr. K. Nugent
Dr. J. W. O'Brien
Dr. R. H. Pallen
Mr. K. Pomkoski
Mr. D. Potvin
Prof. E. Preston
Prof. H. Ripstein
Dr. J. Saber
Dr. G. P. Sassano
Ms. I. Sendek
Dr. J. Tierney
Prof. G. Weiss
Five students to be elected

12.1.4 COUNCIL OF THE SIR GEORGE WILLIAMS FACULTY OF ARTS

Dean I. L. Campbell,
Chairman
Associate Dean M. Armstrong
Dr. J. Bhatnager
Dr. F. Bird
Associate Professor M. Brian
Dr. T. Buckner
Dr. J. Chaikelson
Dr. D. Charlton
Professor E. F. Cooke
Dr. R. Diubaldo
Dr. D. Frost
Dr. G. Huntley
Dr. H. Hutter
Associate Professor A. Jordan
Dr. A. M. Ketter
Dr. D. Laskey
Associate Professor J. Macaluso
Associate Professor E. MacLean
Associate Professor M. Marsden
Mr. J. McBride
Professor D. McDonald
Associate Dean D. McKeen
Dr. P. Morley
Ms. M. Osborne (Assistant to the Dean)
Dr. J. Palmer
Dr. E. Price
Mr. J. Princz
Dr. N. Segalowitz
Assistant Dean B. Slack
Mr. B. Smart
Dr. M. Stelcner
Dr. G. Taggart
Associate Professor M. Verthuy
Dr. R. Wall
Dr. R. Yorkey
Associate Professor J. Young
Dr. J. Zweig

To be Elected

1 — representative for Category III (Assistant Professors — Humanities & Social Sciences)
4 — day students
3 — part time students
1 — graduate student

12.1.5 COUNCIL OF THE FACULTY OF COMMERCE AND ADMINISTRATION

Dean A. Berczi,
Chairman
Prof. B. Barbieri,
Secretary
Ms. Judy Abbott
Prof. L. Bessner
Prof. J. Bordan
Ms. Patricia Bragaglia
Ms. Beverley Brucha
Prof. P. Brunet
Mr. A. Bullard
Prof. C. Cook
Dr. R. Crawford
Prof. G. R. Curnew
Ms. Suzanne Curtis
Prof. H. Dauderis
Mr. R. Davies
Ms. Barbara De Beaupré
Prof. A. Dickie
Prof. G. B. English
Prof. J. Flynn
Prof. Y. Geyikdagi
Prof. M. Gold
Mr. S. Gracioppo
Ms. Susan Hershman
Dr. N. Islam
Dr. G. Johns
Dr. V. Jones
Dr. J. Kelly
Mr. R. Kerkinan
Dr. L. Kryzanowski
Dr. P. Lynagh
Dr. H. Mann
Dr. L. McGown
Dr. J. W. O'Brien
Dr. C. Potter
Dr. S. Robbins
Prof. A. Sanders
Mr. B. Smart
Dr. R. Srinivasan
Ms. Patricia Tingle

Dr. H. Tutsch
Dr. D. West
Dr. E. West
Prof. R. Wills

12.1.6 COUNCIL OF THE FACULTY OF ENGINEERING

Dean J. C. Callaghan,
Chairman
Dr. J. C. Giguere,
Secretary
Mr. K. Adams
Dr. B. B. Bhattacharyya
Mr. J. Bordan
Mr. E. Cerny
Ms. M. Cloutier-Hayes
Dr. M. M. Douglass
Dr. M. P. duPlessis
Dr. P. Fazio
Dr. K. Feher
Dr. W. G. Habashi
Mr. H. S. Heaps
Mr. G. W. Joly
Mr. K. I. Krakow
Mr. J. F. Lindsay
Dr. J. W. O'Brien
Dr. O. A. Pekau
Dr. A. S. Ramamurthy
Dr. A. D. Russell
Dr. T. S. Sankar
Dr. M. N. S. Swamy
Mr. G. D. Xistris
Five students to be elected

12.1.7 COUNCIL OF THE FACULTY OF FINE ARTS

Dean Alfred Pinsky,
Chairman
Councillors to be appointed.

12.1.8 COUNCIL OF THE SIR GEORGE WILLIAMS FACULTY OF SCIENCE

Dr. R.H. Verschingel,
Chairman

Prof. L. S. Adler,
Secretary
Dr. S. Ashtakala
Prof. F. W. Bedford
Mrs. M. Cloutier-Hayes
Dr. M. Cohen
Dr. A. Deland
Dr. H. de Romer
Dr. T. Dwivedi
Dr. N. Eddy
Dr. H. Enesco
Mr. A. Gillich
Dr. Z. Hamlet
Dr. M. Kervin
Dr. Z. S. Khalil
Dr. S. Kumarapeli
Mr. R. Martin
Mr. D. Malka
Mr. J. R. McBride
Dr. S. Morris
Dr. J. W. O'Brien
Dr. H. W. Proppe
Dr. P. Shizgal
Dr. R. E. Townshend
Dr. Y. H. Wang
1 Graduate Student
To be announced
2 Students from the Part-time Students Association
To be announced

12.1.9 CONCORDIA COUNCIL ON STUDENT LIFE

To be announced

12.1.10 OFFICERS OF THE ADMINISTRATION

RECTOR: John W. O'Brien, PhD

EXECUTIVE ASSISTANT TO THE RECTOR:
F. Michael Sheldon, MA

ASSISTANT TO THE RECTOR, PUBLIC RELATIONS AND DEVELOPMENT:
J. Stirling Dorrance, MA

SECRETARY TO THE SENATE:
John W. Noonan, BSc

VICE-RECTOR, ACADEMIC:
Jack Bordan, MScEng

ASSOCIATE VICE-RECTOR, ACADEMIC:
J. R. McBride, MA

ASSOCIATE VICE-RECTOR, ACADEMIC PLANNING:
J. H. Whitelaw, MA

ASSOCIATE VICE-RECTOR, RESEARCH:
Michel Despland, ThD

DIRECTOR OF CONTINUING EDUCATION:
D. J. Potvin, BA BEd

UNIVERSITY RESEARCH OFFICER:
Audrey J. Williams, MSc

FACULTY PERSONNEL OFFICER:
Roslyn Muer, BA

SIR GEORGE WILLIAMS FACULTY OF ARTS:
DEAN:
Ian L. Campbell, MSc
ASSOCIATE DEAN:
Muriel Armstrong, MA
ASSOCIATE DEAN:
David McKeen, PhD
ASSISTANT DEAN:
Brian Slack, PhD

LOYOLA FACULTY OF ARTS & SCIENCE:
DEAN:
Russell Breen, PhD
ASSISTANT DEAN:
W. E. Akin, PhD
ASSISTANT DEAN:
Robert Pallen, PhD
ASSISTANT DEAN:
Eileen M. Preston, MA

SIR GEORGE WILLIAMS FACULTY OF SCIENCE:
DEAN:
Roger Verschingel, PhD
ASSISTANT DEAN:
L. S. Adler, MA

UNIVERSITY FACULTY OF COMMERCE AND ADMINISTRATION:
DEAN:
Andrew Berczi, PhD
ASSOCIATE DEAN, LOYOLA CAMPUS:
G. B. English, MComm
ASSISTANT DEAN:
H. S. Tutsch, LLD
ASSISTANT DEAN:
Roland O. Wills, MBA

UNIVERSITY FACULTY OF ENGINEERING:
DEAN:
J. Clair Callaghan, MSc(Eng)
ASSOCIATE DEAN, LOYOLA CAMPUS:
G. W. Joly, MEng
ASSISTANT DEAN:
J. Charles Giguere, PhD
DIRECTOR, FACULTY PERSONNEL AND RESOURCES,
LOYOLA CAMPUS:
S. J. Kubina, PhD

UNIVERSITY FACULTY OF FINE ARTS:
DEAN:
A. Pinsky
ASSOCIATE DEAN:
E. F. Cooke, BA MFA
ASSISTANT DEAN:
G. Gross, MA MFA

GRADUATE STUDIES:
DEAN:
S. G. French, PhD

VICE-RECTOR AND PRINCIPAL OF LOYOLA CAMPUS:
A. Graham, S.J., MA STL

ASSISTANT TO THE VICE-RECTOR AND PRINCIPAL OF LOYOLA CAMPUS AND SECRETARY OF THE BOARD OF GOVERNORS:
R. P. Duder, MA DLitt

UNIVERSITY ARCHIVIST:
C. A. Sopstyle, MA MLS

ASSISTANT VICE-RECTOR AND UNIVERSITY REGISTRAR:
Kenneth D. Adams, BSc LMus

ASSOCIATE REGISTRAR, OPERATIONS:
Bruce Smart, BA

ASSISTANT VICE-RECTOR, ADMISSIONS AND LIAISON:
Gerald W. Tait, S.J., PhD

DIRECTOR OF ADMISSIONS, LOYOLA CAMPUS:
Grendon E. Haines, BA BPed

DIRECTOR OF ADMISSIONS, SIR GEORGE WILLIAMS CAMPUS:
T. E. Swift, BA

DIRECTOR OF GUIDANCE:
J. A. Sproule, MPsSc

DIRECTOR OF ATHLETICS:
E. Enos, BSc EdD

DEAN OF STUDENTS, SIR GEORGE WILLIAMS CAMPUS:
Magnus Flynn, MA

ASSISTANT DEAN:
Jack Hopkins, BA MSW

ASSISTANT DEAN:
A. D. Insleay, MSc

ASSISTANT DEAN:
J. E. Richardson, BA

DEAN OF STUDENTS, LOYOLA CAMPUS:
A. F. Audet, BPed LTh BA

ASSISTANT DEAN:
Brian T. Counihan, BA MEd

ASSISTANT DEAN:
Marilyn Taylor, MA

ASSISTANT DEAN:
Bluma Rosenstein, MA

VICE-RECTOR, ADMINISTRATION AND FINANCE:
Graham Martin, MSc (Eng)

ASSISTANT VICE-RECTOR AND TREASURER:
William M. Reay, CA

ASSISTANT VICE-RECTOR, PHYSICAL RESOURCES:
Jean-Pierre Pétolas, BSc

ASSISTANT VICE-RECTOR, RELATIONS AND AUDIT:
André J. Laprade, BEng

ASSISTANT VICE-RECTOR, SERVICES:
J. Andrew Woodcock

ASSISTANT VICE-RECTOR AND DIRECTOR OF LIBRARIES:
Paul-Emile Filion, S.J., MS DUL LLD

ASSOCIATE DIRECTOR OF LIBRARIES:
Joseph Princz, BLS MA

DIRECTOR, COMPUTER CENTER:
Ivan Fuchs, BSc

DIRECTOR, AUDIO-VISUAL DEPARTMENT:
Bernard B. Queenan, MA MEd

UNIVERSITY LEGAL COUNSEL:
Jean-Paul Dufour, BA BComm BCL

DIRECTOR OF PERSONNEL, SIR GEORGE WILLIAMS CAMPUS:
John L. Hall, BSc

DIRECTOR OF PERSONNEL, LOYOLA CAMPUS:
M. Emmett McMullan, BA

DIRECTOR OF PHYSICAL PLANT, SIR GEORGE WILLIAMS CAMPUS:
Frank E. Papineau, BME

DIRECTOR OF PHYSICAL PLANT, LOYOLA CAMPUS:
Charles N. McPherson, BEng

DIRECTOR, INSTITUTIONAL RESEARCH OFFICE:
F. Douglas Hamblin, BSc MSc FIMechE PEng

12.1.11 FACULTY FULL TIME

ABRAMS, Patricia, Cert. Professionel de Coupe & Couture *Ecole Cotnoir Capponi, Lecturer in Fine Arts (Theatre Arts)*

ACHESON, P., BA *Lond.*, MS PhD *Indiana, Assistant Professor of Applied Linguistics*

ADAMS, G., BA MA *Tor.*, PhD *Chic., Associate Professor of History*

ADAMSON, A. H. BA *Manit.*, PhD *Lond., Professor of History*

ADLER, Leonda S., BA *SGW.*, MA *McG., Associate Professor of Mathematics*

ADLEY, T. J., BSc *SGW*, PhD DIC *Lond., Associate Professor of Chemistry*

AHMAD, J., BA *Alig.*, Dipl *Intl. School (Hague)* MS *Pitt.*, PhD *M.I.T., Associate Professor of Economics*

AHMAD, M. M., MA *Punj.*, MA PhD *Chic., Associate Professor of Philosophy*

AIKEN, Robert S., BA *Belf.*, MA *McM.*, PhD *Penn. Assistant Professor of Geography*

AKIN, W., BA MA *Univ. of Maryland*, PhD *Roch., Associate Professor of History*

ALAGAR, V.S., BA MSc *Madr.*, MA *N.Y. State*, PhD *McG., Assistant Professor of Computer Science*

ALBERT, P., BSc PhD *New Br., Assistant Professor of Biology*

ALLEN, Christine, BA *Roch.*, PhD *Claremont, Associate Professor of Philosophy*

ALLISON, R. R., BA MA *Calif.*, PhD *Flor. State, Assistant Professor of Fine Arts (Theatre Arts)*

ALVI, S. A., BA MA *Karachi*, PhD *Colorado, Associate Professor of Economics*

AMIT, Z., BA PhD *McG., Associate Professor of Psychology*

ANAND, K. K., BA *Punj.*, MA *Delhi, Associate Professor of Mathematics*

ANASTASOPOULOS, A., BA *Athens*, MA PhD *Roch., Associate Professor of Economics*

ANDERSON, Jacqueline M., MA *Dund.*, MSc *Alta., Lecturer in Geography*

ANDERSON, P. D., BA MSc *W.Ont.*, PhD *Oregon, Associate Professor of Biology*

ANDRES, D. H., BA MA *Texas*, PhD *Wat., Associate Professor of Psychology*

ANDRUS, D. F. P., BA MA *Tor., Associate Professor of Fine Arts*

ANGEL, R. B., MA PhD *McG., Professor of Philosophy*

ANGELL, H. M., BA *SGW*, MA *McG., Associate Professor of Political Science*

ANTOLIN, F., BA *Leon, Spain*, LèsL DèsL *Madrid, Associate Professor of Modern Languages*

ANTONIOU, A., BSc(Eng) PhD *Lond., Professor of Engineering*

ARMSTRONG, Muriel, BA BEd *Alta.*, MA *McG., Professor of Economics*

ARNOPOULOS, P. J., BSc BA *SGW*, MA *N.Y.*, MA *Col., Associate Professor of Political Science*

ARTHUR, K. J., BComm *SGW*, MBA *W. Ont., Assistant Professor of Accountancy*

ASHTAKALA, S., BSc *Mad.*, PhD *Tor., Associate Professor of Biology*

ATWOOD, J. W., BEng *McG.*, MASc *Tor.*, PhD *Ill., Associate Professor of Computer Science*

AUCHINACHIE, G. M., BA *Br. Col.*, MA *Tor., Associate Professor of English*

BABA, V. V., BS *Madr.*, MBA *W. Ill.*, PhD *Br. Col., Assistant Professor of Management*

BABARIK, P., BA MA *Tor.*, PhD *Chic., Associate Professor of Psychology*

BAGCHI, S. N. BSc MSc DSc *Calc., Professor of Physics*

BALDWIN, Mary, BSc MSc *Tas., Assistant Professor of Chemistry*

BARBIERI, B., BA *Montr.*, MBA *Col., Assistant Professor of Marketing.*

BARKMAN, B. L., BA *Middlesbury Coll.*, PhD *Georgetown, Associate Professor of Applied Linguistics*

BARLOW, I. M., BA *Wales*, MA *Cinc., Assistant Professor of Geography*

BARNES, T., Class "A" Teach Dipl *McG.*, BA *Montr.*, MBA *Pitt., Lecturer in Finance*

BARON, L. J., BA *McG.*, MA *Mich. State, Assistant Professor of Education*

BARRY, F. L., NDD ATD *Lond.*, MA *SGW, Assistant Professor of Fine Arts (Art Education)*

BARTON, C. R., BA *Yale*, PhD *N.Y., Associate Professor of Classics and Linguistics*

BAUER, J. H., BA *SGW.*, MA PhD *Manit., Associate Professor of Psychology*

BAUM, Donald N. AB *Calif., Sessional Lecturer in Economics*

BAYNE, C. S., MA *Br. Col., Associate Professor of Quantitative Methods*

BECKMAN, C., AA *Stockton Coll., Calif.*, AB MA *Calif.*, PhD *Rutgers, Assistant Professor of Biology*

BEDARD, W., Rev., O.F.M., BA *Montr.*, STD STL *C.U.A., Associate Professor of Theological Studies*

BEDFORD, F. W., BA *Loyola*, BSc *SGW*, MSc *McG., Professor of Mathematics*

BEISSEL, H. E., BPhil *Cologne*, MA *Tor., Professor of English*

BELINSKY, M. M., BSc MSc *McG., Associate Professor of Mathematics*

BELKIN, Roslyn, BA *SGW*, MA PhD *Montr., Associate Professor of English*

BERCZI, A., BA BSc *SGW*, MBA PhD *McG., Professor of Quantitative Methods*

BERNSTEIN, Jeffrey I., BA *SGW*, MA PhD *W.Ont., Assistant Professor of Economics*

BERTRAND, C. H., BA *Wash.*, MA *Oregon*, PhD *Wis., Associate Professor of History*

BESSNER, L., BComm LIA *McG.*, CA, *Professor of Accountancy*

BHATNAGAR, Jitendra K., BSC LLB *Agra*, MA PhD *Lond., Associate Professor of Education*

BHATTACHARYYA, Bibhuti B., BTech MTech *Kharagpur*, PhD *N.S.T.C., Professor of Engineering*

BINDON, G., BA *SGW*, MPA *Qu., Visiting Assistant Professor of Science and Human Affairs.*

BIRD, F. B., BA BD *Harv.*, PhD *U.T.S. N.Y., Associate Professor of Religion*

BIRD, P. H., BSc PhD *Sheff., Associate Professor of Chemistry*

BLAISE, C. L., BA *Denison*, MFA *Iowa, Associate Professor of English*

BOBETIC, M., Rev., BSc MSc *Univ. of Zagreb.* PhD *Wat., Assistant Professor of Mathematics*

BODE, F. A., BA *Calif.*, MA PhD *Yale, Associate Professor of History*

BORDAN, J., BEng MSc *McG*, Eng Que MEIC *Professor of Engineering*

BOSWALL, M. Alberta, BSc *Dal., Assistant Professor of Mathematics*

BOTTENBERG, W., BMus *Edmonton*, MMus DMA *Cinc., Assistant Professor of Fine Arts (Music)*

BOYARSKI, A. J., BEng ME PhD *McG., Associate Professor of Mathematics*

BOYD, G. McL., BSc *Car.*, MSc *Sask.*, PhD *Br. Col., Associate Professor of Education*

BOYLE, L., BA BComm *Montr.*, MA *McG.*, PhD *Maryland, Associate Professor of Finance*

BRAHAM, M., BA *Goddard*, Dipl Ed *Lond.*, MA *Ill.*, PhD *Stan, Associate Professor of Education*

BRANT, C. S., BA *Reed*, MA *Yale*, PhD *Corn., Professor of Anthropology*

BREEN, R. W. Rev. BA BTh STL *Montr.*, MS, *Fordham*, PhD *Stras., Associate Professor of Theological Studies*

BRENDER, W. J., BA MSc PhD *McG., Associate Professor of Psychology*

BRESLAW, J. A., BA MA *Camb.*, PhD *Calif., Assistant Professor of Economics*

BRETON, G. R., BA *Manit.*, MA *Montr.*, PhD *Mich., Associate Professor of Mathematics*

BRIAN, Mary A., BA *Tor.*, MA *Bryn-Mawr, Associate Professor of Mathematics*

BRIAN, M., MA *Oxon., Associate Professor of English*

BRINK, G., BComm *SGW*, MBA *W.Ont., Professor of Management*

BRODY, J., MSc RNDR *Charles, Associate Professor of Mathematics*

BROES, A., BA *Manhattan Coll.*, MA *Col.*, PhD *Pitt., Associate Professor of English*

BROSS, M., BA MA PhD *Manit., Assistant Professor of Psychology*

BROWN, D., AB *Xavier*, PhD *Tuebingen, Associate Professor of Classics*

BRUNE, Audrey, BA *N.Y.*, MA *Iowa, Associate Professor of English*

BRUNET, J. P., BComm *Montr.*, MBA *Qu., Assistant Professor of Management*

BRUSSELL, E. M., BA *Hobart Coll.*, MA *DePauw (Indiana)*, PhD *New School for Social Research (N.Y.), Assistant Professor of Psychology*

BRYANT, R. W. G., MA *Aberd.*, MSc *Lond.*, Town Planning Dipl *Manc., Associate Professor of Geography*

BUCKLEY, A. G., BSc *Calg.*, MSc *Alta.*, PhD *Br. Col., Assistant Professor of Mathematics*

BUCKNER, H. T., BS *Louisville*, MA PhD *Calif., Associate Professor of Sociology*

BUELL, J., BA *Loyola, Montr.*, MA PhD *Montr., Professor of Communication Studies*

BUI, TIEN D., LèsSc *Saigon*, BASc *Ott.*, ME *Car.*, PhD *York, (Can.,) Assistant Professor of Computer Science*

BURNS, R. B., BA *Loyola*, MA *Car., Associate Professor of History & Canadian Studies*

BUTOVSKY, M., BA *SGW*, MA *McG., Associate Professor of English*

BYERS, V., MSc PhD *McG., Professor of Mathematics*

BYERS, W. P., BSc MSc *McG.*, PhD *Calif., Associate Professor of Mathematics*

CALLAGHAN, J. CLAIR, BA *St. Dun.*, BEng *N.S.T.C.*, MS *M.I.T.*, Eng Que, *Professor of Engineering*

CAMERON, E., BA *Br. Col.*, MA *New Br.*, PhD *McG., Associate Professor of English*

CAMPBELL, I. L., BA *Car.*, MSc *Lond., Professor of Sociology*

CARTER, S.I., BA MA *Tor.*, MEd EdD *Mass., Assistant Professor of Applied Social Science & Commerce and Administration*

CASEY, S. C., Rev., S.J., BA BPEd *Manit.*, PhL STL *Immaculate Conception*, MA PhD *McG., Assistant Professor of Classics*

CATRY-VERRON, Marthe, J., BA *Lille*, MA *Mount Holyoke Coll., Assistant Professor of Etudes Françaises*

CAZALET, J. T., BA *Brooklyn Coll.*, MFA *Yale, Associate Professor of Fine Arts (Theatre Performance)*

CERNY, E., BSc *Montr.*, MEng PhD *McG., Assistant Professor of Engineering*

CHAIKELSON, June S., MA MSc PhD *McG., Associate Professor of Psychology*

CHALK, F. R., BS MS PhD *Wis., Associate Professor of History*

CHAMBERS, D. W., BA *Oklahoma*, MA PhD *Harv., Associate Professor of History and Science & Human Affairs*

CHAN, H., BCom Chinese *H.K.*, MA *Ill.*, PhD *Penn. State, Assistant Professor of Accountancy*

CHARLTON, D. E., BSc *Durh.*, PhD *Sask., Associate Professor of Physics and Director of C.I.S.*

CHARPENTIER, G., BA LèsL MA *Laval, Assistant Professor of Etudes Françaises*

CHENG, R. M. H., BSc Eng *H.K.*, MSc *Manc.*, PhD *Birm., Associate Professor of Engineering*

CHODAK, Szymon, MA *Leningrad*, PhD *Warsaw, Professor of Sociology*

CLARK, Donald R., BA *St. Joseph's Coll.*, MA *Fordham*, MA *Calif., Assistant Professor of Communication Studies*

CLAUS, A., BA *Heidel.*, MA *M.I.T.*, PhD *Tufts, Assistant Professor of Quantitative Methods*

CLINCH, H. A., BA MA *Tor., Associate Professor of Geography*

COHEN, G. E., BSc MSc PhD *McG., Associate Professor of Mathematics*

COHEN, M., BSc *McG.*, PhD *Calif., Associate Professor of Mathematics*

COHEN, P. S., BA *SGW*, Grad *Conservatoire de Musique du Queb., Associate Professor of Fine Arts (Music)*

COLDEVIN, G. O., BA BEd *Sask.*, MEd PhD *Wash., Assistant Professor of Education*

COLEBROOK, L. D., BSc MSc PhD *Auck., Professor of Chemistry*

COMTOIS, U., *Associate Professor of Fine Arts (Sculpture)*

COOK, Christopher J., BComm *Loyola*, MA *SGW., Sessional Lecturer in Economics*

COOKE, E. F., BA *Tor.*, MFA *Iowa, Professor of Fine Arts (Art History)*

COOLIDGE, R., BA *Harv.*, MA *Calif.*, BLitt *Oxon., Associate Professor of History*

CORBO, V., IngCom *Chile*, PhD *M.I.T., Associate Professor of Economics*

COSTANZO, A., BA *Br. Col.*, MA *Wash., Assistant Professor of Modern Languages*

COYTE, R., Dipl in Political Science & Econ BA MA *Oxon., Associate Professor of Political Science*

CRAWFORD, R. L., BA MA PhD *Yale, Associate Professor of Management*

CRONIN, R. T. Rev. S.J., BA *Montr.*, MSc PhD *Fordham, Associate Professor of Biology*

CROSSMAN, A., BA MA *Penn., Assistant Professor of Fine Arts (Music)*

CROW, R. E., BA *W. Res. Univ.*, MA PhD *Mich., Visiting Professor of Political Science*

CURNEW, G. R., BComm *SGW*, MBA *Qu.*, CA, *Associate Professor of Finance*

CZARNOCKI, B. D., BA *McM.*, MA PhD *Wis., Assistant Professor of Sociology*

DANIS, M., BA *Montr.*, MA *Fordham*, LLL *Montr.*, Dipl en Droit Constitutionnel en Science Politique *Paris, Assistant Professor of Political Science*

DAUDERIS, H., BComm *Montr.*, Dipl in Management MBA *McG.*, CA, *Associate Professor of Accountancy*

DAVIDOVIC, G. G., MA *Geneva, Associate Professor of Economics*

DAVIS, C. A., SIB *St. Edmunds Ware*, STL *Greg., Professor of Religion*

DECARIE, G., BA *SGW*, MA *Acad.*, PhD *Qu., Associate Professor of History*

DECELLES, P., BEd BA *Montr.*, BComm *SGW.*, CA, *Lecturer in Accountancy*

DELAND, A. N., BA *Montr.*, MSc *McG.*, PhD *Yale, Associate Professor of Geology*

DEMOCKO, John W., BA *Wilkes Coll.*, MA *N.Y. State, Lecturer in Quantitative Methods*

de ROMER, H. S., BA MSc PhD *McG., Associate Professor of Geology*

DESAI, B., BEE *Jad.*, MSEE *Purdue*, MBA *McG., Assistant Professor of Computer Science*

DESJARDINS, R., BSc MSc *Ott., Lecturer in Bio-Physical Education*

DESPLAND, M., BA LicD *Lausanne*, ThD *Harv., Professor of Religion*

deVRIES, P. J., BA *Alta., Lecturer in Anthropology*

DEWES, M., Art Teach Dipl *Johannesburg School of Art*, Dipl Design Research *St. Martins School of Art, Lond., Assistant Professor of Fine Arts (Studio Art)*

DEWEY, G., BA MA PhD *Notre Dame, Associate Professor of Sociology*

DHAWAN, C., MA *Panj.* (I), MBA *Oregon*, PhD *N.Y., Associate Professor of Marketing*

DHINDSA, K. S., BSc MSc *Panj.*, PhD *Helsinki*, FRMS *Oxon., Associate Professor of Biology*

d'HOLLANDER, P. J., LèsL *Louvain*, Dd'U, DèsL, *Paris, Professor of French*

DICK, J. G., BSc *SGW, Professor of Chemistry*

DICKIE, A., BComm *McG.*, CA, *Professor of Accountancy*

DICKS, D. J., BA *Car.*, PhD *Lond. Assistant Professor of Education*

diMICHELE, C., PhD *Rome, Assistant Professor of Modern Languages*

DIMOCK, H. G., BA *Beloit*, MA EdD *Col., Professor of Applied Social Science*

DINIACOPOULOS, D., BA *Montr., Assistant Professor of Communication Studies*

DIUBALDO, R. J., BA MA *McM.*, PhD *W.Ont., Associate Professor of History*

DOREEN, Dale D., BS MA PhD *Alabama, Associate Professor of Quantitative Methods*

DOUGHERTY, F. P., BComm *SGW* MSc *Clarkson*, PhD *Penn State*, CA *Associate Professor of Accountancy*

DOUGHTY, M., BSc PhD *Lond., Associate Professor of Chemistry*

DOUGLAS, Evan J., BCom MCom *N'cle, (N.S.W.)*, PhD *S. Fraser, Assistant Professor of Commerce*

DOUGLASS, M. M., BEng *McG.*, MSE *George Washington* PhD *Oklahoma State*, Eng Que, *Associate Professor of Engineering*

DOYLE, A. B., BA *Tor.*, PhD *Stan., Associate Professor of Psychology*

DOYLE, J., BA Lic Phil *Greg.*, MA BPaed *Montr., Associate Professor of Philosophy*

DRAIMIN, C., BA *Tor.*, MA *SGW* CA, *Assistant Professor of Accountancy*

DRUMMOND, S. P., Rev. S.J., BA *Montr.*, MA *Tor.*, STL *Immaculate Conception*, PhD *Tor., Professor of Biology*

DRYSDALE, J. P., BA *Millsaps*, MA PhD *Louisiana, Associate Professor of Sociology*

DRYSDALE, Susan, BA *Northland Coll., Ashland* MA PhD *Louisiana State, Associate Professor of Sociology*

DUBAS, M. S., Rev., S. J., BSc MSc (Eng) *Alta.*, PhL PhD *St. Louis Univ.*, MDiv *St. Mary's Univ., Associate Professor of Physics*

DUFFY, R. G., BA *Belf.*, MSc *Calg., Lecturer in Geography*

duPLESSIS, M. P., BSc *Potchef*, BScEng

MSc *Natal*, PhD *Alta.*, Eng Que, *Professor of Engineering*

DWIVEDI, T. D., BSc *Ban.*, MSc *Gorak.*, MSc *Ott.*, PhD *Clarkson, Associate Professor of Mathematics*

DWYER, L., BA *Notre Dame*, MS *Ill., Assistant Professor of Fine Arts (Music)*

EAPPEN, C. E., BSc *Trav.*, MSc *Bom.*, PhD *McG., Associate Professor of Physics*

EDDY, N. W., BA *McM.*, MSc *Mass.*, PhD *Arizona, Associate Professor of Physics*

EGAN, E., BA *Manhattan*, MA PhD *Fordham, Associate Professor of Philosophy*

EHMER, Ilse, BA *SGW*, MA *McG. Assistant Professor of German*

EKLER, K., BSc PhD *McG., Associate Professor of Chemistry*

ENESCO, Hildegard E., BA *Reed*, MA PhD *Col., Associate Professor of Biology*

ENGEL, Elyse, BA *McG.*, MèsArts *Montr. Sessional Lecturer in Applied Linguistics*

ENGLISH, G. B., BA *Montr.*, BCL *McG.*, MCom *Tor., Associate Professor of Finance*

ENOS, E., BSc *Conn.*, MEd EdD *Boston, Associate Professor of Bio-Physical Education*

ENTWHISTLE, H., BSc *Lond.*, MEd *Manc.*, PhD *Lond., Professor of Education*

EUVRARD, M., LèsL Dipl d'Et Sup *Paris, Associate Professor of French*

FAHEY, M. A., Rev. S.J., AB *Boston Coll.*, MA *Fordham*, STL *Weston Coll.*, DTh *Tübingen, Associate Professor of Theological Studies*

FAMIRA, H., Staatsexamen German Phil, Staatsexamen Phys Ed *Univ. of Innsbruck*, PhD *McG., Associate Professor of Modern Languages*

FANCOTT, Terrill, BEng *McG.*, MSc *Ecole Nationale Supérieure de l'Aéronautique*, DSc *Paris, Assistant Professor of Computer Science*

FARRELL, Mona, BA BEd *Montr.*, MA PhD *McG., Assistant Professor of Education*

FAZIO, P. P., BASc *Assum.*, MASc PhD *Windsor*, Eng Que, *Professor of Engineering*

FEHER, Kamilo, Dipl Eng *Zagreb*, MScA *Montr.*, PhD *Sher., Associate Professor of Engineering*

FIDLER, Geoffrey C., BA *Wales*, MA *Lond., Lecturer in Education*

FIKSEL, J. R., BSc *M.I.T.*, DEA *Paris*, MSc PhD *Stan., Assistant Professor of Mathematics*

FINK, H. R., MA *McG.*, PhD *Lond. Associate Professor of English*

FISCHER, C., Rev., S.J., BA *Montr.*, STL *Immaculate Conception*, MA *Stan, Associate Professor of Communication Studies*

FISHER, D., AB MA *Pitt.*, PhD *Chic. Professor of Economics*

FLYNN, J., BCom *Montr.*, MBA *York (Can.) Assistant Professor of Finance*

FONDA, C., PhD *Paris*, PhD *Venice*, PhD *McG., Professor of Modern Languages*

FOSTER, M. B., BA *Syr.*, MA *Minn., Professor of English*

FRANCIS, Wynne, BA *SGW*, MA *McG., Professor of English*

FRANK, B., MSc *McG.*, PhD *Br. Col., Associate Professor of Physics*

FRANKLIN, D. R., BA BCL *McG., Assistant Professor of Management*

FRANKLIN, M. J., BA BCL *McG., Associate Professor of Management*

FRASER, Carol A., BA *McG.*, MA *Montr., Sessional Lecturer in Applied Linguistics*

FRASER, D. A., BA PhD *Tor.*, FAAAS RPF PAg, *Professor of Geography*

FRASER, R. A., BA *SGW, Assistant Professor of Political Science*

FREEDMAN, Rosalyn, BA *McG.*, MA *Mich., Sessional Lecturer in Applied Linguistics*

FRENCH, S. G., BA *Car.*, MA *Roch.*, PhD *Virginia, Professor of Philosophy*

FRIEDLAND, S., BM *New England Conservatory of Music*, MM *Mass., Associate Professor of Fine Arts (Music)*

FRIEDMAN, Frances P., BA *McG.*, MA *Col., Associate Professor of Education*

FROST, D. B., BA MSc *McG.*, PhD *Birm., Associate Professor of Geography*

GABRIEL-LACKI, C., *Baccalaureat Coll. Militaire, Courtine, Associate Professor of Fine Arts (Studio Art)*

GARNET, P., BA MA *Sheff.*, PhD *McG., Associate Professor of Theological Studies*

GAUCHER, Y. J., *Associate Professor of Fine Arts (Studio Art)*

GAVAKI, E., BA MBA *Alabama*, MA PhD *Indiana, Assistant Professor of Sociology*

GECSEI, Tilly, BA MA *Prague, Assistant Professor of Communication Studies*

GEORGE, H. S., BA *Texas Christian*, MA *Calif.*, PhD *Lond., Associate Professor of Fine Arts (Art History)*

GERVAIS, M., Rev., S.J., BA *Loyola (Montr)*, LPH *Immaculate Conception*, MFA *C.U.A.*, STL *Regis*, MA *St. M., Associate Professor of Communication Studies*

GEYIKDAGI, Y. M., BSc *Ankara Academy*, MBA *Col., Assistant Professor of Finance*

GIBSON, T., *Assistant Professor of Fine Arts (Studio Art)*

GIDENGIL, B. Z., BA *Istanbul*, MBA *N.Y.*, PhD *Brad., Visiting Assistant Professor of Management*

GIGUERE, J. C., BEng *McG.*, ME PhD *N.S.T.C. Associate Professor of Engineering*

GILSDORF, W., BA *Baldwin-Wallace*, MA *Bowling Green*, PhD *Mich., Assistant Professor of Communication Studies*

GIMLIN, D. R., BS *Okla. State*, MS *Northeastern*, PhD *Okla. State, Associate Professor of Engineering*

GINTER, D., BA MA *Stan.*, PhD *Calif., Associate Professor of History*

GLAZER, Howard I., BA *Tor.*, PhD *Texas, Assistant Professor of Psychology*

GOGUEN, Jean, BA *Stanislaus, Associate Professor of Fine Arts (Studio Art)*

GOLD, Dolores, BA MA *Manit.*, PhD *Sask., Associate Professor of Psychology*

GOLD, Maurice, BComm, BA *SGW,* MSc *Clarkson,* CA, *Assistant Professor of Accountancy*

GOLDMAN, C., BEng MEng *McG.,* Eng Que., *Associate Professor of Engineering*

GOLDNER, J., BA BComm *SGW,* BSW *McG.,* PSW, *Assistant Professor of Social Science*

GOLDSMAN, A. H., BA *McG.,* MA *Syr.,* PhD. *N.Y., Professor of Psychology*

GOODWIN, J. R., BA *Br. Col.,* MBA *Qu., Assistant Professor of Management*

GORDON, R. T., BFA *Temple,* MS MFA *Wis. Assistant Professor of Fine Arts (Studio Art)*

GRACOVETSKY, S. A., Eng (Physics) *Lausanne,* PhD. *Br. Col., Associate Professor of Engineering*

GRAHAM, A., Rev., S.J., BA *Montr.,* MA *Tor.,* STL *Greg., Associate Professor of Chemistry*

GRAHAM, W. W., BSc *Qu., Assistant Professor of Computer Science*

GRAY, T., BA MA *McM.,* PhD *S. Fraser, Associate Professor of Psychology*

GRAYSON, J. D., MA PhD *N.Y., Associate Professor of Spanish and Linguistics*

GREENBERG, Reesa, BA *McG.,* MA *Tor., Assistant Professor of Fine Arts (Art History)*

GROSS, G., BA *McG.,* MFA *Carnegie Mellon* Dipl Ed *McG.,* MA *Montr., Associate Professor of Fine Arts (Theatre Arts)*

GUINDON, H., BA BPh PhL MA *Ott., Professor of Sociology*

HA, H. K., BASc *Ott.,* MASc *Br. Col.,* DEng *SGW, Assistant Professor of Engineering*

HABASHI, Wagdi G., BEng MSc *McG.,* PhD *Corn., Assistant Professor of Engineering*

HABIB, H., BA *American Univ. of Beirut.* MA *Fordham,* PhD *McG., Professor of Political Science*

HACCOUN, D. M., BA MA PhD *Ohio State, Assistant Professor of Psychology*

HALL, Richard L., BSc PhD *Lond.,* AFIMA MinstP, *Associate Professor of Mathematics*

HALLET (Rahm), L., BA *Wash.,* PhD *Corn., Assistant Professor of English*

HALTRECHT, D., BEng. *McG.,* MBA *Qu., Assistant Professor of Computer Science*

HAMALIAN, Arpi, BBA MA *American Univ. of Beirut, Assistant Professor of Education*

HAMBLIN, F. D., BSc MSc *Durh.,* FIMechE PEng *Sask., Associate Professor of Engineering*

HAMLET, Z., BSc *Madr.,* MSc *Agra,* PhD *Notre Dame, Associate Professor of Chemistry*

HARRISON, John, BA *Wat. Luth.,* BA *Car.,* MFA *Col., Assistant Professor of Communication Studies*

HARRISON, J. L., BA *SGW,* MA *McG.,* MLitt *Camb.,* PhD *Manc., Professor of Education*

HARROW, M., MSc PhD *McG., Professor of Mathematics*

HAWKINS, D. N., BMet PhD *Sheff., Visiting Assistant Professor of Engineering*

HAYES, F., BSc *Lond.,* PhD *McG., Professor of Economics*

HAYES, J. C., BSc *Alta.,* MSc *McG., Associate Professor of Mathematics*

HEAPS, H. S., BSc *Manc.,* MA *Tor., Professor of Computer Science*

HENRIK, E., BA MA *SGW,* PhD *Tulane, Assistant Professor of Psychology*

HERMAN, A., BA *Polish State Film & Theatre Academy,* Professional Diploma *Institut des Hautes Etudes Cinématographiques, Paris, Assistant Professor of Fine Arts (Cinema)*

HERRINGTON, Muriel B., BSc *McG.,* PhD *McM., Assistant Professor of Biology*

HERRMANN, K. J., BA AM PhD *Minn., Associate Professor of Political Science*

HERSCOVICS, N., BSc MSc *McG., Associate Professor of Mathematics*

HERZ, Judith, BA *Barnard Coll.,* MA PhD *Roch., Associate Professor of English*

HEWITT, G. K., BComm *Br. Col.,* MPhil PhD *Yale, Assistant Professor of Economics*

HILL, H., MA *Aberd., Assistant Professor of English*

HILL, J. L., BA *Oklahoma,* MA PhD *Duke, Associate Professor of History*

HILLEL, J., BSc MSc *McG.,* PhD *Br. Col., Associate Professor of Mathematics*

HILTON, A., AB *Brown,* MA PhD *McM., Associate Professor of Psychology*

HLOPHE, S., BA *Puis XII Univ. Coll.,* MA *Alta., Assistant Professor of Sociology*

HODGART, M. J. C., MA *Camb., Professor of English*

HOFBECK, J., BA "Eichstatt Bavaria" CCES *Sorbonne,* STL STD Inst. Catholique *Paris, Associate Professor of Theological Studies*

HOFFMAN, D., BFA *Carnegie-Mellon, Assistant Professor of Fine Arts (Theatre Arts)*

HOFFMAN, S. de V., AB *Temple,* MA PhD *Penn., Associate Professor of English*

HOGBEN, M., BSc *Lond.,* PhD *Alta., Assistant Professor of Chemistry*

HOLLAND, P., BA *Well.,* MA *Auck.,* MA PhD *McM., Assistant Professor of English*

HOOPER, W. R., BA PhD *Tor., Associate Professor of Psychology*

HOPKINS, J. B., BA *Alta.,* MA *Br. Col., Lecturer in Applied Social Science*

HORNER, S. E., BA *SGW,* MSc *Syr., Associate Professor of Fine Arts (Art Education)*

HORWICH, H., BA MA *Dal., Assistant Professor of Sociology*

HUBBARD, W., BA *Oregon,* MA PhD *Col., Associate Professor of History*

HUI, D., BSc *Loyola,* MSc *Tor., Lecturer in Chemistry*

HUNTLEY, G. M., MA PhD *Flor. State, Assistant Professor of Education*

HUTTER, H. H., BA *Craz,* MA *Hunter,* PhD *Stan., Associate Professor of Political Science*

HWANG, W., BSc *Taiwan Cheng-Kung Univ.,* MSc *National Chiao-Tung Univ.,* MSc PhD *Manit., Visiting Assistant Professor of Engineering*

IBRAHIM, Ragai K., BSc *Cairo,* MSc *Alexandria,* PhD *McG, Associate Professor of Biology*

ILANO, A. R., BSChemEng MBA *Philippines,* PhD *Calif., Associate Professor of Finance*

INAGAKI, Morido, MSc MA *Geneva,* PhD *Rotterdam, Professor of Economics*

ISLAM, N., BA MA *Dacca,* MA PhD *McG., Assistant Professor of Economics*

JACKSON, J. D., BA *SGW,* MA PhD *Mich. Associate Professor of Sociology*

JACOBS, E. G., BA *McG.,* MEd *Tufts, Assistant Professor of Education*

JAMAL, M., BA *Punj.,* MA *Br. Col., Assistant Professor of Management*

JAMES, Ellen, BA *Penn.,* MA *Col., Assistant Professor of Fine Arts (Art History)*

JAWORSKI, Wojciech M., Inz MTechSc *Politechnika Warszawska,* DMath *Polish Academy of Sciences, Math Inst of Warsaw, Associate Professor of Engineering*

JENKINS, J. T., BSc MSc *McG.,* Class 1 Teach Dipl, *Macdonald, Associate Professor of Geology*

JOHNS, G. W., BA *N. Carolina State,* MA PhD *Wayne State, Assistant Professor of Management*

JOLY, G. W., BA *Montr.,* BEng MSc *McG.,* Eng Que, *Professor of Engineering*

JONASSOHN, K., BA *SGW,* MA *McG., Professor of Sociology*

JONES, D., *Associate Professor of Fine Arts (Studio Art)*

JONES, H. W., *Assistant Professor of Fine Arts (Studio Art)*

JONES, Vernon J., BA MBA PhD *Br. Col., Assistant Professor of Marketing*

JOOS, E., BA *Bud.,* MA *McG.,* Lic Phil PhD *Montr., Professor of Philosophy*

JORDAN, A., MA *Oxon, Associate Professor of French*

JÜRGENS, J., Vordiplom, Diplom *Bonn,* Dr. Rer. Nat. Der Technischen Universität *München, Assistant Professor of Computer Science*

KACHROO, P. D., BA BEd *J. & K.,* MA *Saug.,* MSc *McG., Assistant Professor of Mathematics*

KALMAN, C. S., BSc *McG.,* MA PhD *Roch., Associate Professor of Physics*

KANTER, M., BS *Rice,* PhD *Calif., Associate Professor of Mathematics*

KAPLAN, Eileen C., BA *Qu.,* MA PhD *Ill., Lecturer in Management*

KAPOOR, N. N., BSc MSc *Panj.* (I), PhD *McM., Associate Professor of Biology*

KASS, R., BA *SGW,* MSW *Tor., Assistant Professor of Applied Social Science*

KATZ, S., BSME *C.C.N.Y.,* MS *Maryland,* PhD *Oklahoma State, Associate Professor of Engineering*

KAWCZAK, A., LLM MA *Cracow,* PhD *Warsaw,* Postdoct Col., *Chic., Calif., Professor of Philosophy*

KAY, T. V., BS *Ill. Inst. Tech.,* MBA *Northwestern,* CPA *Ill., Assistant Professor of Accountancy*

KEILTY, G. C., BA BPhysEd *New Br.,* MSc *Springfield Coll.,* DEd *Boston, Associate Professor of Bio-Physical Education*

KELLEHER, David, BA *SGW,* MA *Tor., Assistant Professor of Applied Social Science*

KELLY, J., BSc MEd *Glas.,* PhD *Strath., Professor of Management*

KELLY, Judith A., BS MFA *Wis., Associate Professor of Fine Arts (Art Education)*

KERVIN, M., BSc *Alta.,* PhD *Oregon, Assistant Professor of Mathematics*

KETTER, Annamaria, BLS MA *McG.,* PhD *Vienna, Associate Professor of German*

KETTERER, D., BA *Wales,* MA *Car.,* DPhil *Sus., Associate Professor of English*

KEVICZKY, A., BSc *Fordham,* MSc *C.C.N.Y., Assistant Professor of Mathematics*

KHALIL, Z., BSc *Alexandria,* PhD *Moscow State, Associate Professor of Mathematics*

KIM, H., BSc MSc *Seoul, National Univ.,* PhD *McG., Associate Professor of Mathematics*

KIPLING, Arlin L., BEng *Sask.,* MSc *McG.,* PhD *Exe., Associate Professor of Physics*

KIRPALANI, Vishnu H., BA *Bom.,* MA *Oxon.,* DSc *Montr., Professor of Marketing*

KLASA, S. L., BEng MEng *Warsaw Inst of Tech.,* MA *Sorbonne,* PhD *Geneva, Associate Professor of Computer Science*

KLEIN, A. N., AB *Mich., Associate Professor of Anthropology*

KNELMAN, F. H., BA *Manit.,* BASc *Tor.,* ME *McG.,* PhD *Lond., Professor of Science & Human Affairs*

KNITTER, W., BA *Chic., Assistant Professor of Education*

KNOOP, H. R. G., BComm *SGW,* MA PhD *Ott., Assistant Professor of Management*

KOMODA, M. K., BA MA *Hawaii,* PhD *York (Can.), Assistant Professor of Psychology*

KORNBLATT, J. A., BS *Calif.,* PhD *Cinc., Assistant Professor of Biology*

KORNBLATT, Judith, BA *Earlham Coll.,* PhD *Cinc., Assistant Professor of Biochemistry*

KOSTER, E. H., BSc *Sheff., Visiting Lecturer in Geology*

KOVACS, R. L., Dipl Maths-Physics *Bud.,* MScPhysics MScMathematics PhD *McG., Associate Professor of Physics*

KOVATS, T. A., BSc *Georgetown,* PhD *Johns H., Associate Professor of Physics*

KRAKOW, K., BEng *McG.,* MSc *Cal. Tech.,* Eng Que, *Associate Professor of Engineering*

KRANTZ, F. H., AB *Col.,* PhD *Corn., Assoc-*

iate Professor of History

KRANTZBERG, J., BEng MSc *McG.*, Eng Que, *Associate Professor of Engineering*

KRAUSE, J. C., BFA *Layton School of Art*, MFA *Cranbrook Academy of Art, Associate Professor of Fine Arts (Studio Art)*

KROL, W. P., BFA MFA *SGW, Lecturer in Fine Arts (Sculpture)*

KRYZANOWSKI, L., BA *Calg., Assistant Professor of Finance*

KUBICEK, T., BA BComm *SGW*, MA PhD *Montr.*, RIA., *Associate Professor of Management*

KUBINA, S., BEng MEng PhD *McG., Professor of Engineering*

KUMARAPELI, P. S., BSc *Lond.*, MSc PhD *McG., Associate Professor of Geology*

KUSANO, K., BA MA PhD *Wash., Associate Professor of Sociology*

KUSY, M. I., BComm *SGW*, MBA *Windsor, Assistant Professor of Quantitative Methods*

KWOK, C. C. K., BEng ME PhD *McG.*, Eng Que, *Professor of Engineering*

LABBÉ, G., BA LèsL BPed *Montr.*, Doct de l'Univ *Paris, Professor of Etudes Françaises.*

LACROIX, L., Bacc. es Arts *Laval*, BA *SGW*, MA *McG.*, MA *Montr.*, Doctorat *Paris X-Nanterre, Assistant Professor of Fine Arts (Art History)*

LADD, H., BSc *Vermont*, MA PhD *Windsor, Professor of Psychology*

LAFFEY, J. F., BA *Pitt.*, PhD *Corn., Associate Professor of History*

LALLIER, A., BA *McG.*, MA *Col.*, International Affairs Cert *Russian Inst., Col., Associate Professor of Economics*

LAM, Clement, BSc PhD *Cal. Tech., Assistant Professor of Computer Science*

LAMBERT, R., BA *Miami*, PhD *Penn., Associate Professor of Psychology*

LANDSLEY, P., Dipl *Winn. School of Art*, Dipl *Montr. Museum of Fine Arts*, Dipl *Acad Montmartre*, Dipl *Acad Ranson, Paris, Assistant Professor of Fine Arts (Studio Art)*

LANG, M. A., BS MS PhD *Carnegie-Mellon, Pitt., Assistant Professor of Engineering*

LASKEY, Dallas, BA MA *New Br.*, PhD *Harv., Professor of Philosophy*

LASZLO, L., BA *Ill.*, MA PhD *Col., Associate Professor of Political Science*

LAU, H., DES *Le Saulchoir*, MA *Montr., Assistant Professor of Philosophy*

LAURION, G., Lès L. *Montr.*, Dipl d'Et Sup Doct de l'Univ *Paris., Professor of Etudes Françaises*

LAUZIERE, A., BA *Ott.*, MA *Montr.* Doct de l'Univ. *Paris, Professor of Etudes Françaises*

LECAVALIER, G., BA MA *Montr.*, PhD *Johns H., Assistant Professor of Sociology*

LEDINGHAM, Jane E., BSc *Tor., Lecturer in Psychology*

LEDUC, G., BA BSc MSc *Montr., PhD Oregon, Associate Professor of Biology*

LEGROS, D., BA MA *Paris, Lecturer in Anthropology*

LENOIR, J., BSc *SGW, Associate Professor of Chemistry*

LEUNG, K. V., LicésSc (Math) *Paris*, Ing *Ecole Special des Travaux Publics, Paris*, Dipl d'Et Sup des Sci Phys *Institut Atomique, Lyon*, Ing Docteur *Paris, Professor of Computer Science*

LEVY, C. M., BA *SGW*, MA PhD *McG., Associate Professor of French*

LEVY, D., LèsL *Bordeaux*, Dipl d'Et Sup *Montr.*, Doct du IIIeme Cycle *Paris, Associate Professor of Etudes Françaises*

L'HERAULT, P., BA *Laval*, BTh *Montr.*, MTh *Ott.*, MA *McG., Assistant Professor of French*

LIEBMAN, C. H. BComm *SGW.*, CA *Lecturer in Accountancy*

LIGHTBOWN, Patsy M., BA *N. Carolina*, MA *Yale* MEd *Col., Assistant Professor of Applied Linguistics*

LIGHTSTONE, J., BA *Car.*, MA PhD *Brown Assistant Professor of Religion*

LIGIER, M., BA *Besançon*, LèsL *Montr., Assistant Professor of Etudes Françaises*

LILLEY, D.G., BSc MSc PhD *Sheff., Associate Professor of Engineering*

LIN, S., BSc Ordnance Engin, *Coll., Taipei*, Dipl Ing D Ing *Karlsruhe*, PEng *Ontario, Associate Professor of Engineering*

LINDSAY, J. F., BSc *Glas.*, PhD *McG.*, Eng *Que, Associate Professor of Engineeing*

LINGAPPAIAH, G. S., MSc *Mys., Associate Professor of Mathematics*

LIPSIG-MUMME, C., BA *Brandeis*, MA *Boston, Assistant Professor of Sociology*

LISHKA, D. E., BA *Wis., Assistant Professor of Religion*

LIU, Z., BA *Soochow Taipeh, Taiwan*, MA *Vanderbilt*, PhD *Colorado State, Assistant Professor of Economics*

LIVINGSTON, M., BA *Col.*, MBA PhD *N.Y., Associate Professor of Finance*

LOCKE, J. W., BA *Emory*, MA *N.Y., Assistant Professor of Fine Arts (Theatre Arts)*

LOMBOS, Bela A., Dipl Phys Chem *Szeged*, PhD *Montr., Professor of Engineering*

LOSIQUE, S., LèsL Dipl d'Et Sup DU, *Paris, Professor in the Conservatory of Cinematographic Art*

LOWENFELD, G., BSc *Hebrew Univ.*, MSc *McG.*, CA *Lecturer in Accountancy*

LOWTHER, Ruth L., MSc *McG.*, PhD *Tor., Associate Professor of Biology*

LYNAGH, P. M., BS *Maryland*, MBA *Oklahoma*, PhD *Mich. State, Associate Professor of Marketing*

MAAG, Tannis Y., BA *Manit.*, PhD *Tor., Professor of Psychology*

MACALUSO, J. A., MA *N.Y., Associate Professor of Spanish and Italian*

MacDONALD D., BComm *SGW*, CA, *Associate Professor of Accountancy*

MacKAY, B. E., BA *W. Ont., Lecturer in Fine Arts (Theatre Arts)*

MacKAY, R., MA *Aberd., Assistant Professor of Applied Linguistics*

MacKINNON, J. A., BSc *Queb.*, MSc PhD *McG., Associate Professor of Physics*

MacLEAN, L. Elizabeth, BA *Tor.*, MA *Smith, Associate Professor of English*

MacLEOD, C. F., BSc *McG.*, MA *Br. Col.*, PhD *Minn., Associate Professor of Biology*

MAHEUX, V., BA *Montr.*, Lic Phil *Laval*, MA *C.U.A.*, PhD *McG.*, Post Doct *Yale, Associate Professor of Psychology*

MAHONEY, G. M., BSc *SGW*, MSc PhD *McG., Professor of Psychology*

MAJUMDAR, K., BSc MSc *Calc.*, PhD *Purdue, Associate Professor of Mathematics*

MALIK, M., BA *Boleslav Academy, Czechoslovakia*, DSc *Prague, Professor of Communication Studies*

MALIK, Mohd A., MSc *Alig.*, PhD *Montr., Associate Professor of Mathematics*

MALY, Edward, BS *Roch.*, PhD *Prin., Assistant Professor of Biology*

MALLEN, B., BA BComm *SGW*, MSc *Col.*, MBA *Mich.*, PhD *N.Y., Professor of Marketing*

MANGAT, B. S., BSc *Lond.*, MSc *Lond.*, DCC Dipl, *Chelsea, Coll of Sc Lond.*, PhD *Lond., Assistant Professor of Biology*

MANN, H., BComm *SGW.*, MBA *McG.*, PhD *N.Y.*, CA. *Professor of Accountancy*

MARGLIN, S.A., AB PhD *Harv., Visiting Professor of Economics*

MARKLAND, E. B., BComm *SGW*, MSU *Mich. State*, CA, FCIS, *Associate Professor of Accountancy*

MARSDEN, M., MA *Camb.*, MSc *McG., Associate Professor of Geography*

MARSH, C., BA MA *Camb.*, Eng Que, *Professor of Engineering*

MARTIN, G., BSc MSc *New Br.*, Eng Que, *Associate Professor of Computer Science*

MARTIN, R., BA *Wesleyan*, MA *Brown, Associate Professor of English*

MARTIN, W. H., BSEd MFA *Ohio*, EdD *Ball State, Associate Professor of Fine Arts (Art Education)*

MASON, M., BA Dipl Ed., *Br. Col.*, PhD *Birm., Associate Professor of History*

MATTAR, S. G., BS *Leeds*, MSc *Calg., Lecturer in Engineering*

McCARTHY, P., BA *San Diego*, PhD *Claremont, Visiting Assistant Professor of Economics*

McCONOCHIE, J. A., BA *Ill.*, MA PhD *Col., Associate Professor of Applied Linguistics*

McCULLOUGH, E. E., BA *Queb.*, MA PhD *McG., Professor of History*

McDONALD, R. D., BA MSW *Tor., Professor of Applied Social Science*

McDONOUGH, Sheila, MA PhD *McG., Professor of Religion*

McDOUGALL, D. J., BSc MSc PhD *McG., Professor of Geology*

McELCHERAN, D., BSc MSc *McM.*, PhD *Leeds, Associate Professor of Chemistry*

McEVENUE, S., BA LPh *Montr.*, MA *Halifax*, STL *Montr.*, SSL SSD *Rome, Associate Professor of Theological Studies*

McGOWN, K. L., BS MBA *Lamar State Coll.*, PhD *N. Texas State, Assistant Professor of Marketing*

McGRAW, J., BA *Notre Dame*, PhB PhL., *Inst. of Phil., Chic.*, PhD *Angelicum, Rome, Associate Professor of Philosophy*

McKAY, J., BSc Dipl Numer Analysis, *Manc.*, PhD *Edin. Associate Professor of Computer Science*

McKEEN, D. B., MA *New Br.*, PhD *Birm., Associate Professor of English*

McKEOWN, R. J., BSc *SGW*, MBA *Qu., Lecturer in Finance*

McLAUGHLIN, J. D., BA PhD *New Br., Assistant Professor of Biology*

McNAMARA, V., BA *Tor.*, MA Lph DPhil *Laval, Associate Professor of Philosophy*

McQUEEN, H. J., BSc *Loyola*, BEng *McG.*, MS PhD *Notre Dame*. Eng Que, *Professor of Engineering*

MENDELSOHN, L. R., BA *Brandeis*, MA *Harv.*, PhD *Wis., Associate Professor of English*

MENIPAZ, E., BSc MSc *Technion-Israel Institute of Technology*, MBA PhD *Cinc., Assistant Professor of Management*

MENON, K., BSc *Trav.*, MSc *Bom.*, PhD *Bda., Assistant Professor of Computer Science*

MILLER, D. M., BA *Ill.*, BD PhD *Harv., Associate Professor of Religion & Asian Studies*

MILLER, F. J., NatDipl in Design, *Ealing Coll. of Art*, ATD *Hornsey Coll. of Art, Lond., Associate Professor of Fine Arts (Studio Art)*

MILLER, J. A., BA *Vic. Tor.*, MA PhD *McM., Visiting Assistant Professor of English*

MISRA, Sushil, BSc *Agra*, MSc *Gorak*, PhD *St. Louis, Associate Professor of Physics*

MITCHELL, P. D., BSc MA *Dal.*, PhD *Case Western Reserve, Associate Professor of Education*

MOHSINI, R. A., *Lug. Grad.* SIS *Mainz*, MA *Sheff., Lecturer in Engineering*

MOLINARI, Guido, *Professor of Fine Arts (Studio Art)*

MOLLIN, R. A., BA MA *W. Ont.*, PhD *Qu., Sessional Lecturer in Computer Science*

MOORE, J. W., BA *Car.*, MA *Tor., Associate Professor of Political Science*

MORAN, Gary Thomas, BS *Bridgeport*, MA *San Diego State* PhD *Oregon, Assistant Professor of Bio-Physical Education*

MORLEY, P. A., BA *Tor.*, MA *Car.*, PhD *Ott., Associate Professor of English & Canadian Studies*

MOROZIUK, R. P., BA MA *Ott.*, SID *Pontifical Inst. of Eastern Ecclesiastical Studies, Rome, Assistant Professor of Theological Studies*

MORRIS, S. P., BSc PhD *McG., Associate Professor of Physics*

MOTTOLA, L. F., BBA *Clarkson,* MSA *George Washington,* PhD *Northern Colorado, Assistant Professor of Quantitative Methods*

MOULEDOUX, Elizabeth, BA *Tulane,* BSLS MA *Louisiana State, Assistant Professor of Psychology*

MOULEDOUX, J. C., BA MA *Louisiana,* PhD *Kentucky, Associate Professor of Sociology*

MUKHERJI, K. K., BSc MSc *Calc.,* Dipl Postgrad *Leeds,* PhD *W. Ont., Associate Professor of Geology*

MULLER, F., MA *F.U. Berlin,* PhD *Ruhr, Associate Professor of Economics*

MULLETT, Sheila, BA *McG.,* MA PhD *Purdue, Assistant Professor of Philosophy*

MULVEY, F. R., BSEd *Tufts, Associate Professor of Fine Arts*

MUNOZ, S. R., BA *McG.,* MA *McM.,* PhD *Wat., Associate Professor of Psychology*

MURPHY, D., BA *Loyola, Montr.,* MA *San Francisco State Coll., Assistant Professor of Communication Studies*

NAGGE, R. J., BA *SGW.,* MEd *Ontario Coll., of Educn., Associate Professor of Applied Social Science*

NASSER, M. S., BSc *Cairo,* MASc PhD *Windsor, Assistant Professor of Engineering*

NATHAN, C., BCom *M Rand,* MSc *Lond.,* PhD *S. Fraser, Visiting Assistant Professor of Economics*

NEEMEH, R. A., BEng *Alexandria,* MEng *McG.,* Eng Que, *Assistant Professor of Engineering*

NEWELL, A., BA MA PhD *Pitt., Associate Professor of English*

NEWMAN, Elaine B., BSc *McG.,* MA PhD *Radcliffe, Associate Professor of Biology*

NEWSHAM, G., BA BEd *Sask.,* MEd *Alta., Assistant Professor of Applied Linguistics*

NISH, C., BA *SGW,* MA *Montr.,* PhD *Laval, Professor of History*

NOGRADY, T., BSc MSc PhD *Bud., Professor of Chemistry*

NOWICKI, L., BA *Montclair State Coll., N.J.,* MA, ABD *N.Y., Associate Professor of English*

OANCIA, David, *Associate Professor of Journalism*

O'BRIEN, G., Rev., S. J., BA *Montr.,* MA *St. M., Halifax,* STB STL *Immaculate Conception,* STD *Woodstock, Associate Professor of Theological Studies*

O'BRIEN, J. E. Rev., S. J., BA *Montr.,* STB *St. M.,* STL *Regis,* PhD *Calif., Professor of Communication Studies*

O'BRIEN, J. W., MA PhD *McG., Professor of Economics*

O'CONNOR, D., BA PhD *St. Louis, Assistant Professor of Philosophy*

OH, K., BA *Chou Coll., Tokyo,* LLB *Tokyo,* MA PhD *Penn., Associate Professor of Political Science*

O'KEEFE, C. B., Rev. S. J., BA *Montr.,* STL *Immaculate Conception,* MA PhD *Tor., Professor of History*

OMRAN, R. G., BSc *Cairo,* MSc *Alexandria,* PhD *Texas, A & M, Associate Professor of Biology*

OPALA, Barbara, BA *SGW,* MA *McG., Coordinator of M.S.P. Programme of the SGW Faculty of Arts and Sessional, Lecturer in English*

OPPENHEIM, M. D., BA *S. Calif.,* MA PhD *Calif., Assistant Professor of Religion*

OPPENHEIMER, R., BSCom and Eng Sc MBA *Drexel, Assistant Professor of Management*

ORNSTEIN, J., BA MA *Br. Col.,* PhD *Calif., Associate Professor of Philosophy*

OSMAN, M. O., BEng *Cairo,* DrScTech *Swiss Fed. Inst. Tech.,* Eng Que, *Professor of Engineering*

OTCHERE, D., BSc *Lond. and Ghana,* MA *Br. Col.,* PhD *McG., Assistant Professor of Economics*

PAIKOWSKY, Sandra R., BA *SGW,* MA *Tor., Assistant Professor of Fine Arts (Art History)*

PALEKAR, Shreekant, MCom LLB *Bom.,* MA PhD *Harv., Professor of Economics*

PALLEN, R. H., BSc *SGW.,* MSc PhD *W. Ont., Associate Professor of Chemistry*

PALMER, J., BA *Indiana State,* MA PhD *Mich., Associate Professor of Applied Linguistics*

PANUSKA, Vaclav., MSc *Prague,* DPhil *Oxon. Associate Professor of Engineering*

PARC, P., LésL Dipl d'Et Sup *Paris, Associate Professor of French*

PARKES, Joel G., BSc, MSc, PhD *Tor., Assistant Professor of Biochemistry*

PARK, Desirée, BA *Coll. of William and Mary* MA *McG.,* PhD *Indiana, Associate Professor of Philosophy*

PASOLD, P. W., BComm *McG.,* MBA PhD *Penn., Assistant Professor of Marketing*

PECHTER, E., BA *Corn.,* MA PhD *Calif., Associate Professor of English*

PEDERZOLI, G., MS *Stan.,* MA *Tor.,* PhD *Milan, Professor of Quantitative Methods*

PEETS, D. L. BSc *McG., Professor of Human Genetics*

PEKAU, O. A., BASc *Tor.,* DIC *Imperial,* MSc (Eng) *Lond.,* PhD *Wat.,* PEng Ont. Eng Que, *Associate Professor of Engineering*

PERRAULT, Yvonne, BA *SGW,* MSc *McG.,* PhD *Ott., Assistant Professor of Psychology*

PERRY, C. W., BA PhD *Syd., Associate Professor of Psychology*

PETERSON, Howard L., BSEd MA *Minn., Assistant Professor of Education*

PÉTOLAS, J. P., BSc *SGW, Associate Professor of Physics*

PETRIE, B. M., DipPE *Syd.,* BPhysEd MPE *Alta.,* MA PhD *Mich. State, Assistant Professor of Bio-Physical Education and Sociology*

PETRIE, Mary, BA *McG., Lecturer in Applied Linguistics*

PHILMUS, M., BA *Brown* PhD *Ca'Foscari, Venice, Associate Professor of English*

PHILMUS, R., BA *Brown* PhD *Calif., Associate Professor of English*

PIETZSCH, W. E., BComm *SGW,* MBA *Mich., Assistant Professor of Accountancy*

PILKINGTON, G., BA *SGW,* MA *McG.,* PhD *Tor., Assistant Professor of English*

PINSKY, A., Dipl *Montr. Mus. Fine Arts, Professor of Fine Arts*

PITSILADIS, P. E. BComm *SGW,* MBA *W. Ont., Associate Professor of Management*

POLLITZER, E. A., BSc *St. John's Shanghai,* MSc *Rutgers, Associate Professor of Mathematics*

POMFRET, R. W. T., BA *R'dg.,* MA *E. Anglia,* PhD *S. Fraser, Assistant Professor of Economics*

POPP, Zoltan G., BComm *Ott.,* MBA *Chic., Associate Professor of Quantitative Methods*

PORTER, R., BA MA *McG., Assistant Professor of History*

POTEET, L. J., AB *Bethany, Nazarene,* MA *Oklahoma,* PhD *Minn., Associate Professor of English*

POTTER, C. C., BScComm *SGW,* MCom PhD *McG., Professor of Finance*

POTTER, H. H., BA *SGW,* MA *McG., Professor of Sociology*

PRADHAN, K. V., BA MA *Bom.,* MBA *York, Assistant Professor of Finance*

PRANINSKAS, J., BA *N.Y.,* MA *Mich.,* PhD *Ill., Visiting Associate Professor of Applied Linguistics*

PREDDY, Enrique, BSc *Uppsala Coll., New Jersey,* PhD *McG., Assistant Professor of Biology*

PRESTON, Eileen, BA *Manc.,* MA *McG., Assistant Professor of Classics*

PRICE, E., BA *SGW.,* Cert d'Et Sup, Dipl d'Et Sup, Doct de Specialite d'Etat Francais, *Grenoble, Assistant Professor of Political Science*

PRILLO, A., BSc *Montr.,* MA *Tor., Associate Professor of Mathematics*

PROBST, W. G., BEng *Rio de Janeiro,* MMath *Wat., Lecturer in Computer Science*

PROPPE, H. W., BSc MSc PhD *McG., Associate Professor of Mathematics*

RADAKRISHNAN, T., B.E. *Madr.,* MTech PhD *I.I.T. Kanpur, Assistant Professor of Computer Science*

RAHN, A., BA MA *Albert-Ludwigs,* PhD *Tor., Assistant Professor of Mathematics*

RAJAN, G. S., BA MA *Annam.,* MS PhD *Wis., Associate Professor of Management*

RAM, A., BA *SGW,* MA *McG., Associate Professor of English*

RAMACHANDRAN, V., BSc DIIScECE DIIScElectronics PhD *I.I.Sc., Professor of Engineering*

RAMAMURTHY, A. S., BSc *St. Philomena's Mys.,* BEng *Nat. Inst. of Engin., Mys.,* MSc *I.I.Sc.* PhD *Purdue, Professor of Engineering*

RAPHAEL, R., BSc MA *Wat.,* PhD *McG., Associate Professor of Mathematics*

RAWIN, S. J., BA *Beirut,* MA *McG.,* PhD *Lond., Professor of Sociology*

REIDY, M., BA *Boston Coll.,* MA PhD *Tor., Associate Professor of Philosophy*

REIMER, W. C., BA MA PhD *Br. Col., Assistant Professor of Sociology*

REZNICEK, William A., BA *Allegheny Coll.,* MA *Corn., Assistant Professor of Fine Arts (Theatre Arts)*

REZNICK, A. E., BA *Loyola,* MA *Tor.,* PhD *Wis., Visiting Assistant Professor of History*

RIDING, A. BEng MEng *McG.,* MBA *SGW., Assistant Professor of Quantitative Methods*

RIGAULT, Odette, BA *Rennes,* MA *McG., Assistant Professor of Etudes Françaises*

RIPSTEIN, H. B., BComm *SGW,* MBA *Qu.,* CA, *Associate Professor of Accountancy*

ROBBINS, S. P., BS BA PhD *Arizona,* MBA *Arizona State, Associate Professor of Management*

RODAL, Alti B., BA *McG.,* BPhil *Oxon, Assistant Professor of Religion*

RONQUIST, E. C., BA *St. John's Maryland,* MA PhD *Chic., Assistant Professor of English*

ROSSNER, John L., BA *Trinity, Hartford,* MA *Brown,* BD Thl *Nashotah,* STM *McG., Associate Professor of Religion*

ROTENBERG, R. H., BComm *SGW,* MBA *McM.,* PhD *Penn., Associate Professor of Marketing*

ROTHKRUG, L. N., AB MA PhD *Calif., Professor of History*

ROY, R. M., MA PhD *Tor., Associate Professor of Biology*

RUBY, Silvia M., BSc *Nfld.,* MSc PhD *W. Ont., Associate Professor of Biology*

RUDÉ, G., BA MA *Camb.,* PhD *Lond.,* DLitt *Adel., Professor of History*

RUDIN, R. E., BA *Pitt.,* MA *York (Can.), Lecturer in History*

RUSSELL, A. D., BASc MASc *Br. Col.,* PhD *M.I.T., Assistant Professor of Engineering*

RYE, Robin T. B., BA MSc *Br. Col.,* PhD *Lond., Associate Professor of Chemistry*

SABER, A. J., BASc *Tor.,* MA PhD *Prin.,* PEng *Ont., Visiting Assistant Professor of Engineering*

SACCA, Elizabeth J., BS MEd PhD *Penn., Associate Professor of Fine Arts (Art Education)*

SAHNI, B. S., MA *Delhi,* MBA *N.Y., PhD New Sch. Soc. Res., Associate Professor of Economics*

SANDBLOM, C. L., Fil. Kand. Fil. Mag. Lund. PhD *Birm., Visiting Assistant Professor of Quantitative Methods*

SANDERS, A., BS BA *Roosevelt,* MA *Northwestern, Assistant Professor of Management*

SANDERS, L., BA MA *Lond.*, PhD *McM.*, *Assistant Professor of Classics*

SANDERSON, W., BA MA *Boston* PhD *N.Y.*, *Associate Professor of Fine Arts (Art History)*

SANKAR, S., BEng *Madr.*, MEng DEng *SGW. Assistant Professor of Engineering*

SANKAR, Thiagas S., BEng *Madr.*, ME *I.I.Sc.*, PhD *Wat.*, *Professor of Engineering*

SASSANO, G. P., DSc *Milan*, PhD *Alta.*, *Assistant Professor of Geology*

SCHEER, H., BA MA *Alta.*, PhD *McG.*, *Assistant Professor of Modern Languages*

SCHEINBERG, S. J., BSc *Chic.*, MSc PhD *Wis.*, *Associate Professor of History*

SCHNEIDER, Jean D., BA *SGW*, MA *McG.*, *Assistant Professor of French*

SCHWARTZMAN, A., PhD *McG.*, *Professor of Psychology*

SCHWELB, O., DiplEng *Bud.*, Eng Que, *Assistant Professor of Engineering*

SEENS, R., BA *S. Fraser*, MA PhD *Vic. B.C.*, *Assistant Professor of Psychology*

SEGALOWITZ, N., BSc *McG.*, PhD *Oxon*, *Associate Professor of Psychology*

SELLERS, W., BS *Rhode Island*, MEd *Pitt.*, EdD *Boston*, *Assistant Professor of Bio-Physical Education*

SENEZ, J., BSc *Manit.*, MSc *McG.*, *Associate Professor of Mathematics*

SERAGANIAN, Peter, BA *McM.*, MA PhD *Dal.*, *Assistant Professor of Psychology*

SERPONE, N., BSc *SGW*, PhD *Corn.*, *Associate Professor of Chemistry*

SHAFFER, H., BComm *McG.*, *Assistant Professor of Marketing*

SHAMES, M., BA MA PhD *Manit.*, *Associate Professor of Psychology*

SHAPIRO Daniel, BA *Calg.*, MA PhD *Corn.*, *Assistant Professor of Economics*

SHARMA, Ramesh C., MA MSc *Delhi*, PhD *Tor.*, *Associate Professor of Physics*

SHARMA, V. Alex, BA *Manchester College*, MA MS, *Indiana*, *Lecturer in Applied Linguistics*

SHELL, Susan L., BA *Corn.*, PhD *Harv.*, *Assistant Professor of Political Science*

SHEPS, G. D., BA *Manit.*, MA *Corn.*, *Associate Professor of English*

SHERMAN, Leah, BA *SGW*, MA *N.Y.*, *Professor of Fine Arts (Art Education)*

SHIN, J., BSs *Swarthmore Coll.*, MSc *Corn.*, *Associate Professor of Physics*

SHIZGAL, Peter, BA *McG.*, MA PhD *Penn.*, *Assistant Professor of Psychology*

SHULMAN, H., BA *SGW*, MA *Car.*, *Assistant Professor of Political Science*

SHUMWAY, Helen B., BS *Mass.*, MA PhD *Kansas*, *Assistant Professor of Fine Arts (Art Education)*

SIDOROW, Angelika-Tatiana, MA PhD *Montr.*, *Associate Professor of Russian*

SIMS, W. A., BA MA PhD *Tor.*, *Assistant Professor of Economics*

SINGER, M., BA *Hunter*, MA *Mich.*, *Assistant Professor of History*

SINGH, Lalita P., BA MA *Alld.*, PhD *Delhi & A.N.U.*, *Associate Professor of Political Science*

SLACK, B., BA *Lond.*, MA PhD *McG.*, *Associate Professor of Geography*

SLOAN, W. K., AOCA *Ontario Coll. of Arts*, *Assistant Professor of Fine Arts (Theatre Arts)*

SMITH, A. E., BS *N.Y.*, MSc *Ill.*, PhD *Mich. State*, *Associate Professor of Physics*

SMITH, B. M., BA *Queen Mary*, MA *Laval*, *Assistant Professor of Applied Linguistics*

SMITH, I. H., BA *SGW*, MA PhD *McG.*, *Associate Professor of History & Russian Studies*

SMITH, J. I., BSc *McG.*, *Associate Professor of Fine Arts*

SMITH, L. A., BEng MBA *McG.*, PhD *N.Y. State*, *Associate Professor of Quantitative Methods*

SMITH, M., BSc *McG.*, MBA *York*, *Lecturer in Computer Science*

SMITH, N. E., BA *New Br.*, MA PhD *McG.*, *Professor of Mathematics*

SMITH, R., BA *Montr.*, MSc *Tor.*, Teach Dipl *Tor.*, *Assistant Professor of Mathematics*

SMOLA, J., BComm BA *SGW*, MA PhD *Montr.*, *Professor of Management*

SMUCKER, J., BA *Bluffton*, MA PhD *Mich.*, *Associate Professor of Sociology*

SOMMER, R. J., BA *Minn.*, MA PhD *Harv.*, *Associate Professor of English*

SORFLEET, J. R., BA MA *Manit.*, PhD *New Br.*, *Associate Professor of English*

SORIC, J., BSc MSc *McM.*, *Associate Professor of Mathematics*

SPENSLEY, P., BA *Wis.*, MA PhD *Wayne State*, *Associate Professor of Fine Arts*

SPICER, M., BA *Montr.*, MA *Inst. d'Etudes Medievales, Montr.*, MA *McG.*, PhD *Ott.*, *Associate Professor of Theological Studies*

SPRINGFORD, Norma, BA CDA *New Br.*, *Professor of Fine Arts (Theatre Arts)*

SPRINGSTON, F., BA *Calif.*, PhD *Stan.*, *Assistant Professor of Psychology*

SPROULE, J. A., BA *SGW*, MPsSc *McG.*, *Assistant Professor of Applied Social Science*

SRINIVASAN, S., BSc MSc *Madr.*, MS PhD *Western Reserve*, *Associate Professor of Quantitative Methods*

SRIVASTAVA, T., BSc MSc *Luck*, PhD *Gorak*, *Associate Professor of Mathematics*

STANO, Miron, BComm *McG.*, MA PhD *Corn.*, *Visiting Assistant Professor of Economics*

STARK, F., BA *Tor.*, MA PhD *Northwestern* *Assistant Professor of Political Science*

STEFANOVIC, V. R., Dipl Eng. *Belgrade*, MEng PhD *McG.*, *Assistant Professor of Engineering*

STELCNER, M., BComm *McG.*, MA PhD *Syr.*, *Associate Professor of Economics*

STERN, R. J., BSc *Cooper Union*, MSc PhD *Northwestern*, *Assistant Professor of Mathematics*

STEWART, Jane, BA *Qu.*, PhD *Lond.*, *Professor of Psychology*

STOKES, Anne M., BA *SGW,* MA *St. Michael's, Vermont,* MA *Essex Associate Professor of English*

STRONG-BOAG, V., BA *Trin.* Coll. *Tor.,* MA *Car.,* PhD *Tor., Assistant Professor of History*

SUEN, Ching Y., BScEng MScEng *H.K.,* MASc PhD *Br.Col., Associate Professor of Computer Science*

SUGDEN, L., BA BEd MA *Manit.,* Doct de l'Univ *Nice, Associate Professor of Etudes Françaises*

SVOBODA, J. V., Dipl Ing *Prague,* DEng *Concordia, Assistant Professor of Engineering*

SWAMY, M. N. S., BSc *Mys.,* DIIScECE *I.I.Sc.,* MSc PhD *Sask.,* Eng. Que., *Professor of Engineering*

SYNNOTT, A. J., BSc *Lond.,* MA *W. Ont., Assistant Professor of Sociology*

SZABO, M. E., MA *Oxon,* MSc PhD *McG., Associate Professor of Mathematics*

TAGGART, G. C., MA *Colorado,* PhD *Montr., Professor of French*

TAKAHASHI, A., BA *Meiji, Tokyo,* MA *Hawaii,* PhD *Pitts. Assistant Professor of Economics*

TARASOFSKY, A., BComm *SGW,* MA PhD *McG.,* CA *Associate Professor of Economics*

TASCONE, J., BA MA *St. Bonaventure, Associate Professor of Sociology*

TAYLOR, D., BA MA PhD *Tor., Assistant Professor of English*

TAYLOR, Maxwell, BA *Wales,* PhD *Liv., Visiting Assistant Professor of Psychology*

TAYLOR, Nancy D., BA *McM.,* MA PhD *McG., Associate Professor of Psychology*

TEE, O. S., BSc *Leic.,* MSc *McM.,* PhD *E.Anglia, Associate Professor of Chemistry*

TIERNEY, Joan, BSc MA *Seton Hall,* PhD *Indiana, Associate Professor of Communication Studies*

TIFFOU, Maylis, BA *Toulouse,* Dipl d'Et Sup *Montr., Assistant Professor of Etudes Françaises*

TITTLER, R., BA *Oberlin Coll.,* MA PhD *N.Y., Associate Professor of History*

TOBIAS, Rytsa H., BA *SGW., Professor of English*

TODOROVIC, U., BComm MBA *SGW., Assistant Professor of Marketing*

TOMASKI, J. A., BA *N.Y. State, Univ. of Harpour,* MBA *Roch., Assistant Professor of Finance*

TOUPIN, P., BA *Montr.,* MA *Col.,* Doct de l'Univ *Aix-en-Province, Professor of Etudes Françaises*

TOWNSHEND, R. E., MSc *W.Ont.,* PhD *Ott., Associate Professor of Chemistry*

TRESIERRA, J., BA *Catholic Univ., Lima, Peru,* MA PhD *Notre Dame, Assistant Professor of Sociology*

TROITSKY, M. S., DiplCE DTechSc *Belgrade,* Eng Que, *Professor of Engineering*

TRUCHON, N., BA *Laval,* MA *McG., Assistant Professor of Etudes Françaises*

TRUDEL, G., BSc *McG.,* PhD *Leeds, Associate Professor of Chemistry*

TRUEMAN, C., BEng MEng *McG., Lecturer in Engineering*

TURAGA, M., BE *Osm.,* MS *Roch. Inst. Tech., Lecturer in Engineering*

TURGEON, J. C., MS PhD *Col., Associate Professor of Mathematics*

TUTSCH, H. S., LLD *Masaryk, Associate Professor of Management*

UFFORD, J. R., BEng *McG.,* MASc *Tor.,* PhD *McG., Professor of Chemistry*

VALASKAKIS, Gail., BSc *Wis.,* MA *Corn., Assistant Professor of Communication Studies*

VAN NUS, W., BA *Tor., Assistant Professor of History*

VAN TOCH, Lila, BA *Dur.,* LesL *Lille,* MA *Dur., Assistant Professor of Etudes Françaises*

VAN ZANTE, N. R., BS *Central State,* MS *Okla. State, Assistant Professor of Accountancy*

VERSCHINGEL, R. H. C., BSc *SGW,* PhD *McG., Professor of Chemistry*

VERTHUY, Mair E., BA *Lond.,* MA *Tor., Associate Professor of French*

VIDYASAGAR, M., BS MS PhD *Wis., Associate Professor of Engineering*

VIPOND, Mary, BA *Qu.,* MA PhD *Tor., Assistant Professor of History*

WAGNER, N., BFA *Mt. All.,* MA *Concordia, Lecturer in Fine Arts (Art Education)*

WAINWRIGHT, B., *Associate Professor of Fine Arts (Studio Arts)*

WALL, R. E., BA *Holy Cross, Mass.,* MA PhD *Yale, Professor of History*

WALTER, D. E., BM MM *Eastman School of Music, Lecturer in Fine Arts (Music)*

WALTERS, A. V., BA MA *Sheff.,* PhD *McG., Assistant Professor of Sociology*

WALTERS, G. R., BA MFA PhD *Prin., Assistant Professor of Fine Arts (Art History)*

WANG, Y. H., BS *National Taiwan,* MBA *N.Y.* MS *Stan.,* PhD *Ohio State, Associate Professor of Mathematics*

WARDY, B., BEd *Israel,* D Jewish Phil & Bibl Exg *Hebrew Univ. Jerusalem,* BA MA *McG., Assistant Professor of Classics*

WAREHAM, R., BA *R.M.C.,* MA *Mich., Associate Professor of English*

WARNER, J., BA *Whittier Coll.,* MA PhD *Prin., Visiting Associate Professor of Sociology*

WATERS, Katherine, BA *McG.,* BEd *St. Josephs Teach-Coll,* MA *Oxon, Associate Professor of English*

WAUGH, T., BA *W. Ont.,* MFA *Col., Assistant Professor of Fine Arts (Cinema)*

WEISS, G., BA MBA *McG., Lecturer in Computer Science*

WESOLOWSKY, S., BA *Montr.,* MA PhD *Prin., Associate Professor of Theological Studies*

WEST, D., BSc BA *Acad.*, MA PhD *Tor., Associate Professor of Quantitative Methods*

WEST, E. N., BSc *R.M.C.*, MS PhD *Iowa State, Associate Professor of Quantitative Methods*

WESTBURY, R. A., BSc PhD *McG., Associate Professor of Chemistry*

WHEELER, David, BSc *Lond.*, FIMA, *Visiting Professor of Mathematics*

WHITE, Donna, BS *Ohio*, MS PhD *Pitt., Associate Professor of Psychology and Education*

WHITELAW, J. H., MA *Oxon*, MA *Montr., Professor of Modern Languages*

WHITTOME, Irene, DiplFA *Vancouver School of Art, Assistant Professor of Fine Arts (Studio Art)*

WIDDEN, P., BSc *Liv.*, PhD *Calg., Assistant Professor of Biology*

WIDDOWS, P. F., MA *Oxon*, PhD *Chic., Professor of Classics*

WILBUR, R., BA *Mt.All.*, MA *Qu., Professor of History*

WILLIAMS, B., BA *Tor.*, MA *Alta.*, PhD *Car., Associate Professor of Political Science*

WILLS, R. O., BSc *Dal.*, MBA *Windsor, Associate Professor of Quantitative Methods*

WISE, R. A., BA MA *Calif. State*, PhD *McG., Associate Professor of Psychology*

WRIGHT, A., DEP FD *Glas.*, MSc *Springfield Coll., Mass., Assistant Professor of Bio-Physical Education*

WRIGHT, B., BA MA *S.A., Assistant Professor of Economics*

XISTRIS, G. D., BEng ME *McG.* Eng Que. *Associate Professor of Engineering*

YORKEY, R. C., BA *Yale*, MA EdD *Mich., Professor of Applied Linguistics*

YOUNG, J. W., BSc *Lond.*, MA *Br. Col.*, PhD *McG., Associate Professor of Geography*

ZAKI, M., BSc *Luck.*, MSc *Alig.*, PhD *Montr., Associate Professor of Mathematics*

ZEMAN, V., PhD *Prague, Associate Professor of Philosophy*

ZIELINSKI, Zenon A., Inz MTechSc DTechSc *Politechnika Warszawska*, Eng Que *Professor of Engineering*

ZIENIUS, R., BSc PhD *McG., Associate Professor of Chemistry*

ZWEIG, J. P., BSc BComm *SGW*, MA *McG.*, PhD *Col., Professor of Psychology*

12.1.12 EMERITUS PROFESSOR

BRIDGES, James W., BA *McG.* PhD *Harvard*

12.1.13 RESEARCH PROFESSORS

Full-Time

PANI, B., BE *Assam Engineering Coll.*, ME *B'lore*, PhD *Alta., Visiting Research Assistant Professor of Engineering*

SUNDARESHAN, M. K., BA *B'lore*, MEng PhD *I.I.S., Visiting Research Assistant Professor of Engineering*

Part-Time

ALLEY, D., BA *Dal.*, MA *Br.Col., Research Associate Professor of Computer Science*

12.1.14 LIBRARIANS

ANDERSON, H., BA *Wis.*, MLS *McG., Orientation Librarian*

APPLEBY, J., BA *SGW*, MLS *McG., Reference Librarian (Vanier)*

BOUCHER, L., BA *SGW*, BLS *McG., Reference Librarian (Vanier)*

BRUCE, E., BA *Windsor*, BLS *Tor., Reference Librarian (Norris)*

BRUCHA, B., BA BLS *McG., Reference Librarian (Norris)*

CAMERON, D., BA BLS *McG., Collections Coordinator*

CARPENTIER, L., BA *Laval*, BLS *Tor.*, MBibl *Montr., Government Publications and Microforms Librarian*

CHANG, M. M., BA *National Taiwan Univ.*, MLS *Calif., Head, Cataloguing Department*

CHENG, J., BMus *Mt. St. Vinc.*, BLS *Br.Col.*, MLS *W.Ont., Assistant Director of Libraries, Technical Services*

CLOUTIER-HAYES, M., BSc MLS *McG., Reference Librarian (SEL)*

COHEN, M., BA *McG.*, PhD *Exe.*, MLS *McG., Reference Librarian (Norris)*

COORSH, K., BA *SGW*, MLS *McG., Reference Librarian (Vanier)*

FILTON, P. E., BA *Montr.*, LPh, LTh *Immaculée-Conception*, MSLS *Columbia*, DUL Laval, LLD *W.Ont., Assistant Vice-Rector and Director of Libraries*

JIRKOVSKY, Z., Dipl Ing *Tech. U. Prague*, MLS *McG., Reference Librarian (SEL)*

KALB, S., BA *SGW*, MLS *McG., Cataloguing Librarian*

KATZ, S. B., BA *McM.*, BLS *Tor., Cataloguing Librarian*
KVETAN, M., BA *Marianopolis*, BLS *McG., Staff Relations Officer*
MacLELLAND, M., BA *New Br.*, MLS *McG., Systems Librarian*
ORBACH, M., BA BLS MLS *McG., Reference Librarian (Vanier)*
PERRON, H., BPh BLS *Ott., Reference Librarian (Vanier)*
POLSON, J., BA MA BLS *Br.Col., Head, Norris Reference Department*
POPE, N., BSc *Bishop's*, MLS *McG., Reference Librarian (SEL)*
PRESLEY, R., BA *Milligan*, MSc *Ill., Head, Acquisitions Department*
PRINCZ, J., BA *SGW*, BLS *McG.*, MA *Montr., Associate Director of Libraries and Head, Reader Services*
ROBERTSON, D., BA *SGW.*, BLS *Ott., Interlibrary Loans Librarian*
ROBINS, N., BA *Marianopolis*, BLS MLS *McG., Special Collections Librarian*
ROHRLICK, R., BSc MLS *McG., Reference Librarian (Drummond Science)*
RUBINLICHT, L., BA *SGW*, MLS *McG., Cataloguing Librarian*
SCHWARTZ, C., BA MLS *McG., Cataloguing Librarian*
SENDEK, I., BA *Marianopolis*, BLS MLS *McG., Head, Loyola Campus Libraries*
SINGER, L., BA MLS *McG.*, MA *Mich., Reference Librarian (Norris)*
SNOWBALL, G. J., BSc *Lond.*, MLS *McG., Head, Administrative Services*
SULYOK, A., BA *Bud.*, BLS *Ott.*, MLS *McG., Head, Norris Circulation Department*
SWANICK, L., BA *SGW*, MLS *McG., Reference Librarian (Norris)*
TALLON, J., BA *Manit.*, MA MLS *W. Ont., Reference Librarian (Norris)*
WELLS, N., BA *Winn.*, BLS *Br.Col., Reference Librarian (Norris)*
WILSON, R., BA *Columbia*, MLS *McG., Cataloguing Librarian*
ZEMAN, E., BA *Prague, MLS W.Ont., Cataloguing Librarian*

12.1.15 FACULTY PART TIME

ADKAR, C. K., BEng *Rensselaer*, MEng *McG., Eng Que, Lecturer in Electrical Engineering*
AHAD, S. E., BEng *Cairo*, MEng *McG.*, PEng, *Lecturer in Electrical Engineering*
AHMAD, Junaid, BComm *Concordia, Lecturer in Accountancy*
AHMAD, M. O., BSc *Alld.*, BEng *SGW, Lecturer in Electrical Engineering*
AITKEN, W., BA *Missouri*, MA *McG., Lecturer in English*
ALBRIGHT, Darryl, BSc MEd *N. Dakota*, EdD *Indiana, Lecturer in Health Education*
ALLAN, T. S., MA *Glas., Lecturer in Education*
ALLISON, Nancy, AB *Converse Coll.*, MA *Calif., Lecturer in Theatre Arts*
AMANTE, L., BA *McG., Lecturer in Italian*
ANISSIMOFF, Mrs. Irene, MA (Slavistic) *Montr., Lecturer in Russian*
ARCHAMBAULT, C., BA *Coll. St. Laurent*, BScA *Montr.*, MEng *Texas A & M, Lecturer in Civil Engineering*
ARGEMI, G., Dipl *Chile, Lecturer in Spanish*
ARVANITAKIS, G., BA MA *Montr., Lecturer in Linguistics*
AUSTIN, K., BMus *McG., Lecturer in Music*
AVNI, Micha, BSc BEng *Inst. Tech., Lecturer in Management*
AYERS, Carol, BScNut *McG.*, MScNut *Lond., Lecturer in Health Education*

BAIN, Freda, BFA *Rhode Island School of Design, Lecturer in Studio Art*
BAKER, D., BSc *Br.Col.*, MEd *S. Fraser, Lecturer in Health Education*
BARDT, Elizabeth, BFA Dipl Art Ed *SGW, Lecturer in Art Education*
BARKER, M., BA BPh (Ps) MPs *Montr., Lecturer in Andragogy*
BARNES, Heather, BSc *Marianopolis, Lecturer in Health Education*
BARUTCISKI, T., BEng *Belgrade*, DEng *Paris Lecturer in Civil Engineering*
BASHCONJI, G., BSc *Lond.*, MTM *SGW., Lecturer in Mathematics*
BATTELLE, Barbara, BA *Duke*, MArtEd *SGW, Lecturer in Studio Art*
BAUM, J., BSc *Ott.*, MBA *McG., Lecturer in Management*
BAYLIN, Rosalynd, BA, MA *McG., Lecturer in English*
BEAMENT, Tib, MArtEd *SGW, Lecturer in Studio Art*
BELAND, L., Bac Art Plastique *UQAM, Lecturer in Studio Art*
BELLMAN, M., BComm MBA *SGW*, CA *Lecturer in Accountancy*
BENDER, E., BSc Dipl Management *McG., Lecturer in Library Science*
BENOIT, Rosemarie, BA *Ott.*, MLS *Montr., Lecturer in Library Science*
BERKOVITS, S., BComm *SGW*, CA *Lecturer in Accountancy*
BERNARD, P. M., BA *Ste. Marie*, BSc *McG.*, MBA *St. John's*, PhD *C.U.N.Y., Lecturer in Quantitative Methods*
BERNSTEIN, D. M., BA *SGW*, LLL *Montr., Lecturer in Political Science*
BERTRAND, Lucie, BA *Jean Brebeuf, Lecturer in Theatre Arts*
BESSETTE, F., PhD *Rome, Lecturer in Italian*
BHATNAGAR, R. D. S., BSc *Agra* BSc MSc *Panj. (I.)*, PhD *Sask., Lecturer in Biology*
BLAUER, R., MFA *Mich., Lecturer in Studio Art*
BLEICHERT, E. F., BSc *SGW*, MSc *Dal.*, PhD *Corn., Lecturer in Biology*
BLOOMSTONE, Rabbi B., BA *McG.*, BHL MA *HUC., Lecturer in Theological Studies*
BOAST, G., BSc *SGW, Lecturer in Computer Science*

BOKROSS, Agnes H., BA *SGW.*, PhD *McG., Lecturer in English*
BONATHAN, Katherine, BA *McG.*, MArtEd *SGW, Lecturer in Studio Art*
BOZEL, F., BSc MSc PhD *McM., Lecturer in Mathematics*
BRADLEY, D. A., *Lecturer in Geology*
BRANDL, Eva, BFA *Laval,* MFA *Concordia, Lecturer in Studio Art*
BRATT, S., BComm *SGW,* CA *Lecturer in Accountancy*
BREINER, L., BEng *McG., Lecturer in Management*
BRIGGER, Denise, BSc MSc *McG., Lecturer in Health Education*
BRONSARD, H. P., *Lecturer in Studio Art*
BROWN, G. R., BSc *Manit.*, PhD *McG., Lecturer in Chemistry*
BROWNE, Marie C., BA *Penn.*, MA *Wash., Lecturer in English*
BROWNS, S., BMath *Wat., Lecturer in Computer Science*
BUBALO, Anna, PhD *Deglistudi Di Roma, Lecturer in Italian*
BUCKLEY, Suzanne, BSc *Car.*, MD *Ott., Lecturer in Health Education*
BUNKER, D. H., BComm *SGW,* BCL MCL *McG., Lecturer in Management*

CAMPBELL, Cathrin, BSc BLS *Ott.*, MLS *McG., Lecturer in Library Science*
CAMPBELL, G., BA MSc *Corn.*, PhD *Rutgers, Lecturer in Health Education*
CANTIN, R., *Lecturer in Cinema*
CARSON, R., BComm MBA *SGW, Lecturer in Management*
CASS-BEGGS, Rosemary, *Lecturer in Theatre Arts*
CHAKI, Grace, BA *McG., Lecturer in English*
CHALK, K. T., BA *SGW, Lecturer in Astronomy*
CHAMBERS, C., BComm *SGW,* MBA *York (Can)* CA *Lecturer in Accountancy*
CHAN, T., BEng *McG.*, MEng *McM., Lecturer in Computer Science*
CHANG, S., BSc *SGW,* MSc *Concordia, Lecturer in Mathematics*
CHARLEBOIS, Joyce, BSc MLS *McG., Lecturer in Library Science*
CHARON, Linda, BA, MA *SGW., Lecturer in Psychology*
CHATTOPADHAY, A., BEng ME *Calc.*, PhD *I.I.T. Kanpur, Lecturer in Civil Engineering*
CHICHA, M., Ing I.T.A. *Paris,* Eng Que, *Lecturer in Civil Engineering*
CLARKE, R., MTM *SGW., Lecturer in Mathematics*
CLEMENTS, S., BSc *McG.*, MA *Platts. Coll., Lecturer in Management*
COCHRANE, E., BA *SGW.*, BEd MEd DEd *Tor., Lecturer in English*
CONSTANTIN, Bernadette, BA *St. F.X., Lecturer in Biology*
COPLIN, H., MA PhD *Mich., Lecturer in Health Education*
CORDES, W. F., BComm *SGW,* CA *Lecturer in Accountancy*
COULTER, Joan, BA *Montr., Lecturer in Library Science*
COUVES, E. E., BSc *Alta.*, MBA *W. Ont., Lecturer in Quantitative Methods*
CREAN, P., *Lecturer in Theatre Arts*

DAFOE, J., BA *Manit., Lecturer in Journalism*
DAHL, E. A., Eng Que, *Lecturer in Civil Engineering*
D'ALESSIO, M., BA *Loyola,* MA DEd *McG., Lecturer in Italian*
DANFORD, Dorothy, *Lecturer in Theatre Arts*
DANIELS, R., BComm *SGW, Lecturer in Library Science*
D'APPOLONIA, S., BSc MSc *McG.*, PhD *Lond., Lecturer in Biological Sciences*
DAS, S. K., BTelE METelE Phl *Jad.*, MScEng *New Br., Lecturer in Electrical Engineering*
DATT, S., BSc MSc *Panj. (I.), Lecturer in Biology*
DAVIES, B., FICA (Eng.) *Lecturer in Accountancy*
DAVIS, K., BComm *SGW,* CA *Lecturer in Finance*
DAWSON, T., BMus *Vic.B.C.*, MMus *McG., Lecturer in Music*
DECKERT, Pamela, BA *Washington D.C.*, MA *Calif. St.*, PhD *S. Calif., Lecturer in Psychology*
DeFELICE, M., BComm *SGW, Lecturer in Finance*
DeGRAAF, R., MSc *T.H. Delft, Lecturer in Mathematics*
DE LAET, C., MA *Montr., Lecturer in Social Aspects of Engineering*
DEL BARRIO, A., MA *Santiago, Lecturer in Spanish*
DEMIERRE, D., BA MA *Camb., Lecturer in Music*
DERY, F., BFA *SGW, Lecturer in Studio Art*
DETHEUX, J., Dipl *Royal Acad.Fine Arts, Superior Inst. of Arch. Liege, Lecturer in Studio Art*
DEVINE, Irene, BA *SGW,* MA *Goddard, Lecturer in Applied Social Science*
DICKSON, Jennifer, *Lecturer in Studio Art*
DiPIETRO, G., BA *Hartford,* MA *McG., Lecturer in Italian*
DI TOMASO, F. B., BComm *Loyola,* CA *Lecturer in Accountancy*
DIXON, J., BSc *McG., Lecturer in Chemistry*
DOBSON, A., BSc *Manit.*, MTM *SGW., Lecturer in Mathematics*
DONAHUE, J., BA *Loyola,* MA *Middlebury, Lecturer in Spanish*
DOW, Margaret, BA *SGW., Lecturer in English*
DUBE, L. S., *Lecturer in Mathematics*
DUCKWORTH, M., BA *Yale,* MA *Tor., Lecturer in Cinema*
DUNCAN, Donna, BA *Marianopolis,* BLS MLS *McG., Lecturer in Library Science*
DUPONT, Chantal, BA *SGW, Lecturer in Studio Art*

DURLEY, M. C., BA *Boston,* MA *Col. and Montr.,* PhD *Montr., Lecturer in Theological Studies*

EIBEL, Deborah, BA *McG.,* MA *Johns Hopkins, Lecturer in English*
EL DIWANY, M., BSc *Cairo,* MSc *Calg., Lecturer in Computer Science*
ELLISON, Jane, *Lecturer in Music*
ENESCO, M., MD *Roumania,* PhD *McG., Lecturer in Biological Sciences*
ENTUS, E., BSc MTM *SGW., Lecturer in Mathematics*
EPSTEIN, W., BComm, *SGW,* CA *Lecturer in Accountancy*

FAINARU, J., MA *SGW, Lecturer in Studio Art*
FARRELL, A., BComm *St.F.X.,* Dipl Mktg Mgmt *W. Ont., Lecturer in Marketing*
FINEGOLD, R., BA *SGW,* MLS *McG., Lecturer in Library Science*
FINESTONE, J., BSc *SGW,* CA *Lecturer in Accountancy*
FISCHER, J., BA *Adelphi,* MA *York,* PhD *Wat., Lecturer in Computer Science*
FORBES, V., BSc *Manit.,* MSc *McG., Lecturer in Mathematics*
FOSS-SKIFTESVIK, Odd E., BA., MA *SGW.,* Exa. Philosophicum *Oslo, Norway, Lecturer in English*
FOX, A., BA *SGW.,* MSc PhD *McG., Lecturer in Mathematics*
FOX, E., *Lecturer in Mathematics*
FOX, J., *Lecturer in Studio Art*
FOY, Kay, BA *Winn.,* BLS *McG., Lecturer in Library Science*
FRANKMAN, P., BA *Troy,* MA *Austin, Lecturer in Spanish*
FRASER, J., BSc MSc *SGW., Lecturer in Biology*
FRASER, S., BSc *Exe.,* MSc *Birm., Lecturer in Quantitative Methods*
FRATICELLI, Rina, BA *Loyola* MA *Montr., Lecturer in English*
FRIED, Sheila, BSc MBA *McG., Lecturer in Quantitative Methods*
FRY, D., BA MA *Mis., Lecturer in Biology*
FUCHS, K., BA *Loyola,* MID *Pratt Inst., Lecturer in Studio Art*

GAERTNER, E., BSA *Tor.,* MS PhD *Cornell, Lecturer in Biological Sciences*
GAGNE, Helene, BA *Coll.Jesus-Marie,* MA *Teachers Coll. Col., Lecturer in Art Education*
GAL, O., BEng *McG.,* MEng *SGW, Lecturer in Quantitative Methods*
GALLER, Anne, BA *SGW* MS *Simmons, Lecturer in Library Science*
GARDNER, B., MA *Edin., Lecturer in Library Science*
GAREBIAN, K., BA *Thos. More,* MA *SGW,* PhD *Qu., Lecturer in English*
GERMINARIO, R. J., BA MS *Seton Hall,* PhD *North Dakota, Lecturer in Biology*
GILBERT, M., BComm BA *SGW,* MBA *Harv., Lecturer in Management*
GILES, Jennifer, BMus *McG., Lecturer in Music*
GILLESPIE, G. W., BSc *Br. Col., Lecturer in Computer Science*
GOLD, G., BComm *SGW,* MBA *Corn., Lecturer in Marketing*
GOLDENBERG, M., CA *Lecturer in Accountancy*
GOLDSMITH, Bernice, *Lecturer in Social Aspects of Engineering*
GOTTHEIL, M., BA *SGW,* MA *York, Lecturer in English*
GRADINGER, Judith, BA *Boston,* MSc *C.U.N.Y., Lecturer in Psychology*
GRAUB, Sup Mei, BA *Malaya,* MA EdD *McG., Lecturer in Health Education*
GRAVEL, Francine, Dipl *Ec.des Beaux Arts Lecturer in Studio Art*
GRAVENOR, C., BA BCL *McG., Lecturer in Health Education*
GRAY, G., BA *SGW, Lecturer in Applied Social Science*
GRAYSON, M. R., BScEng MScEng *Lond., Lecturer in Civil Engineering*
GREEN, J. W., BComm MBA *SGW, Lecturer in Management*
GREENBERG, A. P., BComm *McG.,* MBA *Pitt.,* CA *Lecturer in Accountancy*
GREENSPAN, H., BSc., MSc *McG., Lecturer in Mathematics*
GREGOIRE, R. B., CSA *Montr.,* CA *Lecturer in Accountancy*
GUERRIERO, J., BSc *Loyola,* MSc *Qu., Lecturer in Mathematics*

HABERMAN, M., BComm *SGW,* MBA *McG., Lecturer in Marketing*
HANDLEMAN, O., BComm *SGW.,* CA *Lecturer in Accountancy*
HARDIMAN, M., BSc *St.And., Lecturer in Chemistry*
HARE, Clara, BEd *Alta.,* Cert. in Speech and Drama, *Central Sch. Speech and Drama Lond., Lecturer in Theatre Arts*
HARPER, R., BA *Vic.Tor.,* MA *Tor., Visiting Associate Professor in Art History*
HARROW, R., *Lecturer in Mathematics*
HART, D., BSc *McG.,* MS MTM *SGW, Lecturer in Mathematics*
HART, S. D., BA *SGW,* BCL *McG., Lecturer in Management*
HAYEK, A., MSc *Minn., Lecturer in Mathematics*
HENEIN, W., BEng *Cairo,* MEng *SGW, Lecturer in Management*
HENKEY, C. H., Rev. BCL STD PhD *Greg., Lecturer in Theological Studies*
HERSHEY, Vae, BA *Dakota Wesleyan,* MA *Wash., Lecturer in Health Education*
HILLEL, Shelheveth, Dipl *Ont. Coll. of Art, Lecturer in Cinema*
HILLS, P. J., BSc *North Wales,* MSc *Sheff.,* PhD *Sur., Lecturer in Biology*

HILTON, A. R., BA *SGW*, BCL LLB *McG., Lecturer in Public Law*

HOFFER, Sorryl, BA MA *McG.*, MA *SGW, Lecturer in English*

HOFFMAN, G., BComm *SGW, Lecturer in Accountancy*

HOFFMAN, Sandra, BA *Wat.*, BLS *Tor.* MLS *McG., Lecturer in Library* Science

HOFMANN, T., BSc MA *McG., Lecturer in German*

HOLLAND, Vivienne K., BA *Well.*, MA PhD *McM., Lecturer in English*

HOOPER, G., BA MA PhD *Leeds, Lecturer in English*

HOUTAKKER, Richelle, BA BMusEd *Rosary Coll. Chic.*, MA *Flagstaff, Lecturer in English*

HUDSON, Suzanne, *Lecturer in Studio Art*

HUMBER, L., BSc *SGW.*, PhD *New Br., Lecturer in Chemistry*

HUSSON, G. E., BEng MEng *McG.*, Eng Que, *Lecturer in Electrical Engineering*

IRVING, Heather, BSc *SGW, Lecturer in Computer Science*

ISENBERG, S., *Lecturer in Biological Sciences*

JACOBSON, G., BEng MEng *McG., Lecturer in Civil Engineering*

JANY, J. S., BComm *Tor.*, MBA *SGW, Lecturer in Management*

JOLLIFFE, M., Dipl Fine Arts *Vancouver School of Fine Arts, Lecturer in Studio Art*

KAHANE, Anne, *Lecturer in Studio Art*

KANDESTIN, G. F., BCL *McG., Lecturer in Management*

KENT, D., BA *W. Ont.*, MA *Detroit, Lecturer in Mathematics*

KHAN, J., BComm *SGW, Lecturer in Quantitative Methods*

KING-EDWARDS, Lucille, BA MA *McG., Lecturer in English*

KIVENKO, K., BEng PhD *McG.*, Eng Que, *Lecturer in Quality Management*

KNUDSEN, C., BFA *SGW, Lecturer in Studio Art*

KOSITSKY, N., BA *McG., Lecturer in Mathematics*

KUDO, Alice, BA *Qu.*, MLS *Montr., Lecturer in Library Science*

KUDSI-ZADEH, A. A., BA MA PhD *Indiana, Lecturer in Political Science*

KURYS, R., MS *Clarkson*, MTM MSc *SGW, Lecturer in Mathematics*

LABELL, Libby, BA *SGW, Lecturer in Applied Social Science*

LACH, E., MA PhD *McG., Lecturer in German*

LAKE, Suzanne, *Lecturer in Studio Art*

LAMARCHE, Gail, *Lecturer in Art Education*

LAMBEK, Mrs. Hanna, BA MA *McG., Lecturer in Marketing*

LANGDON, P., MEd *SGW*, MFA *Concordia, Lecturer in Studio Art*

LANGSTADT, R., *Lecturer in Studio Art*

LANTHIER, J. P., BA *St. F.X.*, BCL *McG., Lecturer in Management*

LAPIN, J., BA *SGW*, M Ind Design *Rhode Island School of Design, Lecturer in Studio Art*

LASALLE, M., BScA *Ecole Polyt., Lecturer in Management*

LATTONI, E., BComm *Loyola, Lecturer in Management*

LAVELL, J. B., BComm *SGW*, CA *Lecturer in Accountancy*

LAVIGNE, B., Teaching Dipl *Sask., Lecturer in Studio Art*

LAVIGUEUR, H., BA *McG.*, MA PhD *Ill., Lecturer in Psychology*

LAZAR, N., BA *SGW*, BCL LLB *McG., Lecturer in Management*

LEFEBVRE, Marthe, BA *Loyola, Lecturer in Spanish*

LENNOX, Gladys R.N., BA *Concordia Lecturer in Health Education*

LEVINE, C. F., AB *Corn.*, MA *Stan., Lecturer in Political Science*

LEVINE, D., BEng *McG.*, MPhEng *Lond.*, MHA *Montr., Lecturer in Health Education and in the DIA Programme*

LIBERMAN, J. L., BSc BCL MSc *McG.*, MBA *SGW, Lecturer in Management*

LIBROWICZ, O., BA MA *Paris*, PhD *Col., Lecturer in Spanish*

LINDSAY, R. L., BEng MEng *McG.*, Eng Que, *Lecturer in Civil Engineering*

LINTON, R., BComm LIA *McG.*, CA *Lecturer in Accountancy*

LISIEWICZ, A., BSc *Montr.*, MSc *McG., Lecturer in Health Education*

LITVACK, I., BA *SGW*, MA *McM.*, BCL *McG., Lecturer in Economics*

LITWIN, M., BSc BEng *McG., Lecturer in Quantitative Methods and in Mathematics*

LLOYD, Mavis, BEd MEd *McG., Lecturer in Early Childhood Education*

LOUCKS, D., BComm MBA *SGW, Lecturer in Quantitative Methods*

LOUIS, M., Dipl Civil Design *Liverpool* BArch *McG., Lecturer in Civil Engineering*

LOVASCO, F., BSc *Loyola*, MA *W. Ont., Lecturer in Mathematics*

LOWSKY, M., BSc *McG.*, MBA *Temple*, Dipl Mgmt *McG., Lecturer in Marketing*

LUCAS, K., *Lecturer in Studio Art*

LUSSIER, P., BA *Ecole des Beaux Arts, Lecturer in Studio Art*

MACDONALD, R., BSc *Qu.*, Eng Que, *Lecturer in Engineering*

MACEY, M., BComm *Loyola*, CA *Lecturer in Accountancy*

MACLAURIN, Charlotte, BA MLS *McG., Lecturer in Library Science*

MacPHERSON, M., BSc *Manit*, BComm MBA *SGW, Lecturer in Marketing*

MADALI, L., MA *Chic.*, PhD *Iowa, Lecturer in English*

MAHALKA, G., BA *SGW, Lecturer in Studio Art*

MAHDALY, H., BS MA *Arizona State, Lecturer in Computer Science*

MAJEWSKI, D. B., BComm *SGW,* CA *Lecturer in Accountancy*

MALINA, M., BA *McG., Lecturer in Cinema*

MARIN, M., MS DSc *Madrid,* PhD *U.C.L.A.,* Eng Que, *Lecturer in Computer Science*

MARKHAM, W. L., BComm *McG.,* CA *Lecturer in Accountancy*

MAROUN, T., BSc *State Univ. Coll., Potsdam, N.Y.,* MSc *Canisius Coll., Buffalo, N.Y.,* MEd *N.Y.,* EdD *Indiana, Lecturer in Health Education*

MARTINEZ, M., BA MEd MA *Montr., Lecturer in Spanish*

MASON, Mary, BA *Birm., Lecturer in Library Science*

MATSON, Carol, BEd *Br. Col.,* MA *SGW*

Lecturer in Studio Art

McELLIGOTT, P., MBA *Concordia, Lecturer in Marketing*

MCGILLIS, D., BSc *Montr.,* BEng *McG., Lecturer in Electrical Engineering*

McLEOD, R. T., BComm *SGW,* CA *Lecturer in Accountancy*

MCLEOD, V., BASc *Wat., Lecturer in Computer Science*

MEADOWCROFT, J., BSc MA *McG., Lecturer in English*

MEARNS, R., BSc *SGW., Lecturer in Mathematics*

MELOCHE, G., BA DesD *Ott., Lecturer in Management*

MERCIER, M., BSc MSc *Alta., Lecturer in Social Aspects of Engineering*

MERSON, K., BComm *SGW,* CA *Lecturer in Accountancy*

MICHAEL-PAUL, Sister, *Lecturer in Mathematics*

MILKMAN, Lauretta J., Ileme Grand Prix (Honours), Ier Grand Prix *Lycee Musical Marseilles,* Lic. de concert, *Lecturer in Music*

MILLER, B., BSc MSc *SGW., Lecturer in Biology*

MILLER, Rosemary, *Lecturer in Studio Art*

MILLMAN WILSON, Doreen, BA MLS *McG., Lecturer in Library Science*

MILLS, M., *Lecturer in Cinema*

MIRZA, I. A., BA MA *Punj., Lecturer in Economics*

MOHABIR, K., MA *McG., Lecturer in German*

MONAHAN, Sherry, BScN *Wash., Seattle, Lecturer in Health Education*

MOORE, D., BA *Dub.,* BA *Québ., Lecturer in Studio Art*

MOSZKOWSKI, D., BComm *SGW,* CA *Lecturer in Accountancy*

MOUSSEAU, J.-P., *Lecturer in Studio Art*

MUKHEDKAR, D. N., BEng *Osm.,* PhD *Nancy, Lecturer in Electrical Engineering*

MUKHERJEE, S., BSc Elect Eng *Punj. Eng. Coll.,* MEng *Jad., Lecturer in Computer Science*

MUNRO, R. G., BComm *SGW,* CA *Lecturer in Accountancy*

MURPHY, Marie-Pascale, BSc *Laval, Lecturer in Biology*

MURRAY, R., BFA *Cranbrook Acad. of Art, Lecturer in Studio Art*

NARINE, Latchmy, BA *Delhi,* MA *Dal., Lecturer in Mathematics*

NASI, M., BComm *Concordia, Lecturer in Quantitative Methods*

NEMETH, G. A., BA *SGW.,* MSc, PhD *McG., Lecturer in Psychology*

NEMIROFF, Greta, BA *McG.,* MA *Bos., Lecturer in Women's Studies*

NGUYEN, K. N., BS MS *Georgia Inst. Tech* Dipl Etudes Approfondies *Toulouse,* PhD. *McM., Lecturer in Mechanical Engineering*

NICHOLSON, O., FCIS, *Lecturer in Institutional Management*

NKIWANE, S., BA *Colorado,* MA *Macq.,* PhD *McG., Lecturer in Political Science*

NOVACK, Helen, BA *SGW,* MLS *McG., Lecturer in Library Science*

NOZETZ, H., BComm MBA *SGW,* CA *Lecturer in Accountancy*

O'BRIEN, P., BA *Bishop's,* LLL *Laval, Lecturer in Management*

O'CONNOR, A., BA *Loyola,* BSc *McG.,* MA PhD *Montr., Lecturer in Mathematics*

O'CONNOR, E., Rev. BA *St. M.,* MA *Tor.* PhD *Harv.,* STL *Weston, Lecturer in Mathematics*

OLISHANSKY, L., *Lecturer in Quantitative Methods*

ORR, J. E., BS MS *Berkeley,* Eng Que, *Lecturer in Mechanical Engineering*

OTTOLENGHI, E., MA *Middlebury, Lecturer in Spanish*

PEARSON, J., BA *Loyola,* BEd *St.Jos.,* Lic Ped *Montr.,* MA *Ohio, Lecturer in Quantitative Methods and in Mathematics*

PHULL, P., MTM *SGW., Lecturer in Mathematics*

PHULL, S., BA BEd *Panj. (I.),* MA *Jab.,* MTM *SGW., Lecturer in Mathematics*

PIERCE, C., BA *Minn.,* MD *Sask., Lecturer in Health Education*

PLOTEK, Lee, BFA *SGW, Lecturer in Studio Art*

PODESTO, B., BSc MScA *Laval,* Eng Que, *Lecturer in Electrical Engineering*

POIRIER, Maben W., BA *Loyola,* MA PhD *McG., Lecturer in Political Science*

POTTER, Jessica, BA *McG.,* MA *W. Ont., Lecturer in Psychology*

POTVIN, D., BA BEd *Montr., Lecturer in Andragogy*

PRATT, P. G., BA *Loras, Ia.,* MA *Wayne State, Lecturer in Spanish*

PREHOGAN, K., BComm BCL *McG., Lecturer in Public Law*

PRICE, Adrienne, BA *Tor.*, Cert of Ed *Lond.*, MEd *McG., Lecturer in Health Education*

QUACKENBUSH, Diane, BFA *N.S. Coll. Art and Design, Lecturer in Studio Art*

RADU, K., BA *Tor.*, MA *Wat., Lecturer in English*
RAIKES, R., BComm *Br.Col., Lecturer in Accountancy*
RAMAGE, Hazel, BA MA *SGW, Lecturer in Cinema*
RAPHAEL, Leyla, LèsLPhil *Lyons, Lecturer in Social Aspects of Engineering*
RAUCH, S., BEng MEng *McG.*, Eng Que, *Lecturer in Electrical Engineering*
REDDY, C. H., BEng *S. Venkat.*, MEng *Bda.*, PhD *Osm., Lecturer in Electrical Engineering*
REDMOND, N., BSc *San Marcos*, MSc PhD *Montr., Research Associate and Lecturer in Biology*
REED, Carole, BA *SGW*, Dipl Ed *McG., Lecturer in English*
REGENER, E., BA *N.Y.*, MFA PhD *Princ., Lecturer in Computer Science*
REIMER, Fran, BA MA *Br.Col., Lecturer in Sociology*
REINBLATT, H., BComm MBA *SGW, Lecturer in Finance*
RENAUD, R. J., BComm *Loyola*, CA *Lecturer in Accountancy*
RIOUX, G., BA *Coll. de St. Louis*, MA *Sorbonne, Lecturer in Art History*
RIVERS, R. Z., BA *W. Ont.*, MA *Well., Lecturer in Institutional Management*
ROBERTSON, Lee A., BComm *SGW*, RIA *Lecturer in Accountancy*
ROCHEFORT, G., BA *Sudbury*, BSc MSc PhD *McG., Lecturer in Health Education*
ROHRLICK, M., BFA *McG., Lecturer in Studio Art*
ROONEY, L., BComm *Loyola*, MBA *York (Can.), Lecturer in Accountancy*
ROSENBLOOM, S. B., BA *SGW*, MA *York, Lecturer in Social Aspects of Engineering*
ROSENZWEIG, G., Dipl *Brit.Inst.Engg. Tech. Lond.*, PEng, *Lecturer in Engineering*
ROUSSELLE, J., BS Ing MS *Montr.*, PhD *Colorado St., Lecturer in Civil Engineering*
ROY, M., BA MA PhD *Tor., Lecturer in Italian*
RUDDY, J., BSc *Loyola*, BEd *St. Jos.*, MTM *SGW, Lecturer in Mathematics*
RUSHBROOK, J. S., *Lecturer in Mechanical Engineering*
RUVINSKY, M., BSc *McG., Lecturer in Cinema*

SALOMON, Mrs. Carole J., MBA *McG., Lecturer in Marketing*
SAMUELS, J. P., BComm *Manit.*, MBA *McM., Lecturer in Marketing*
SANCHEZ, Myriam F., BA BSc MA PhD *Havana, Lecturer in Spanish*
SAUNDERS-OPPENHEIM, Martha, BS *Dayton*, MA *Calif., Lecturer in Religion*
SAXTON, G., BComm *SGW, Lecturer in Management*
SBROCCHI, F., MBA *W. Ont., Lecturer in Accountancy*
SCHAPER, M., MA *Montr., Lecturer in German*
SCHERMERHORN, D., *Lecturer in Mathematics*
SCHLESINGER, F., BBA MBA *C.U.N.Y., Lecturer in Marketing*
SCHMIDT, A. F., Ing *Army Engg.Tech. Coll., Berlin*, Eng Que, *Lecturer in Engineering*
SCHWARTZ, M., BComm *SGW*, MBA *McM., Lecturer in Marketing*
SEGAL, Carol A., BA *SGW.*, BSW MSW *McG., Lecturer in Applied Social Science*
SEGAL, Celina, BFA *SGW, Lecturer in Studio Art*
SEMENIUK, S. W., BComm *Windsor*, MBA *Mich., Lecturer in Finance*
SEN, P. K., BEng Elect *Jad.*, MEng PhD *N.S.T.C., Lecturer in Electrical Engineering*
SEVIGNY, P., BA CComm *Laval, Lecturer in Finance*
SHARMA, M., BEng *IOE India*, MEng *McG., Lecturer in Quantitative Methods*
SHARP, Marjorie, BA *SGW*, BCL LLB *McG., Lecturer in Management*
SHARPE, D., Dipl *Alta. Inst. of Tech., Lecturer in Studio Art*
SHAUGHNESSY, R., BA *Loyola*, BEd *St. Jos.*, MTM *SGW, Lecturer in Mathematics*
SHERIFF, Tara Asha, BA *SGW*, MA *McM., Lecturer in Political Science*
SHOUB, B., BSc *McG.*, MTM *SGW., Lecturer in Mathematics*
SHTULL, G., BComm *McG.*, MBA *York (Can.)*, CA *Lecturer in Accountancy*
SIDORENKO, E., BA *St. Laurent*, Lic *Montr., Lecturer in Italian and Russian*
SIEGEL, Lois, BS MA *Ohio, Lecturer in Cinema*
SILAS, M., BA MA *McG.*, Dipl Ed *Lond., Lecturer in English*
SIMON, Sherry, BA *Brandeis*, MA *Ecole Pratique des Hautes Etudes, Paris, Lecturer in English*
SIMS, Marilyn, BA MA *McG., Lecturer in English*
SINGH, N. P., BSc *Ban.*, DEng *SGW, Lecturer in Electrical Engineering*
SIRSLY, Mrs. Carol-Ann, BComm *Loyola*, BScEng *Loyola*, MBA *SGW, Lecturer in Accountancy*
SKELLY, W. C., BComm MBA *SGW, Lecturer in Accountancy*
SKELTON, J. P., BA *McG.*, MBA *Wharton, Lecturer in Marketing*
SKULSKI, H., MA PhD *Montr., Lecturer in Russian*
SMITH, Nancy, BFA *SGW*, MFA *Concordia, Lecturer in Studio Art*
SMITH, Vivian E., BA *Ott.*, BEd., *Montr.* MEd *St. M. Coll. Vt.*, MSc *N.Y.State*, PhD *Kansas State, Lecturer in Institutional Administration*
SNOWBALL, G., BSc *Lond.*, MLS *McG., Lecturer in Library Science*

SPENCER, Elizabeth, BA *Belhaven Coll.*, MA *Vanderbilt, Lecturer in English*
SPITZER, W., MD *Tor.*, MHA *Mich.*, MPH *Yale, Lecturer in Health Education*
SRIVASTAVA, Shanta, BSc *Agra*, BT *Punj.*, MSc *Luck.*, MSc *Montr.*, PhD *Macdonald, Lecturer in Biology*
STANBRIDGE, R., *Lecturer in Studio Art*
STAVRIDES, K., BA *Ott.*, MA *McG., Lecturer in Spanish*
STEE, W., BA *McG., Lecturer in English*
STEINBERG, Rhona, BA *McG.*, MSc *St.F. Coll. Indiana*, PhD *Sask., Lecturer in Health Education*
STEINER, E. S., BComm *SGW*, CA *Lecturer in Accountancy*
STEINLE, G., BA *Munich*, MA *Aachen*, PhD *McG., Lecturer in German*
STEWART, Barbara RN, BScN *McG., Lecturer in Health Education*
STEWART, J., BJ *Car., Lecturer in Journalism*
SULLIVAN, M. J., BA *SGW*, MA *McG., Lecturer in Political Sociology*
SULLIVAN, Ruth, BA *Minn., Lecturer in English*
SUTHERLAND, D. E., BComm *SGW*, CA *Lecturer in Accountancy*
SVISTUNENKO, J., BEng *McG.*, MBA *W. Ont., Lecturer in Management*
SWIRZON, P., BASc *Tor.*, MSc *McG., Lecturer in Quantitative Methods*
SWIRZON, Susan, BComm *Tor.*, CA *Lecturer in Accountancy*
SYED, Tasneem M., BSc *Karachi, Lecturer in Computer Science*

TADROS, J. P., MA *McG., Lecturer in Cinema*
TAIT, Janice, BA *Tor., Lecturer in Social Aspects of Engineering*
TAKHAR, G. S., BScEng *Panj. (I.)*, MSEE *Wash.*, PhD *S.M.U., Lecturer in Electrical Engineering*
TEVEL, A., BComm *SGW*, MBA *McM., Lecturer in Finance*
THYAGARAJAN, K. S., BEng *Madr.*, MTech *I.I.T. Kanpur, Lecturer in Electrical Engineering*
TIWARI, U., *Lecturer in Mathematics*
TOMASEK, O., BEng *Prague*, BSc *SGW, Lecturer in Quantitative Methods*
TOOBY, N. D., BComm *SGW*, Dipl Bus Adm & Mktg *Qu., Lecturer in Accountancy*
TOWNSEND, D. F., BComm MBA *SGW, Lecturer in Quantitative Methods*
TRASK, F. S., BA *Acad.*, BComm *SGW, Lecturer In Quantitative Methods*

UDY, J. M., BA *Durh., Lecturer in Urban Studies*
USHER-JONES, B. E., BComm *SGW*, CA *Lecturer in Accountancy*

VALDMANIS, J., BSc Dipl Mgmt *McG., Lecturer in Management*
VALERY, Suzanne, Dipl *Con.d'Art Dramat. du Queb., Lecturer in Theatre Arts*
VALLEJO, Mrs. C., BA *SGW*, MA *McG., Lecturer in Spanish*
VANDERSLUIS, C., IR *Delft*, Eng Que, *Lecturer in Electrical Engineering*
VANDYCKE, Jacqueline, Lic en philologie romane, Agrégation en philologie romane, *Louvain, Lecturer in French*
VANVERI, R., BASc *Tor.*, MEng *McG., Lecturer in Management*
VENOR, R., *Lecturer in Studio Art*
VERCHERE, B., LLB *Br. Col., Lecturer in Accountancy*
VITALE, R., BA *Loyola, Lecturer in Spanish*

WAGSCHAL, Marion, BA *SGW, Lecturer in Studio Art*
WALKER, Margo, BA MLS *McG., Lecturer in Library Science*
WARD, D. A., BSc *Alta.*, MBA *W. Ont., Lecturer in Management*
WASSERMAN, Rachael C., BA MA *McG.*, AM *Harv.*, PhD *Corn., Lecturer in English*
WATKINS, R., BSc *SGW*, MBA *McG., Lecturer in Civil Engineering*
WEINSTEIN, L., BA *Manit., Lecturer in Education*
WEINTRAUB, P., BComm *SGW*, MBA *McM., Lecturer in Marketing*
WEISS, Barbara, BA MEd *McG., Lecturer in Education*
WEST, C., CA *Lecturer in Accountancy*
WHEELER, O., *Lecturer in Art History*
WHITEHALL, E. G., CA *Lecturer in Accountancy*
WILLIAMS, M., BComm *McG.*, CA *Lecturer in Accountancy*
WILSON, P. H., BComm *SGW, Lecturer in Management*
WISEMAN, Marci, BA MA *SGW, Lecturer in Music*
WOOD, W. G., BASc *Wat.*, MEngSc *Melb., Lecturer in Civil Engineering*
WORSWICK, R., *Lecturer in Engineering*
WRIGGLESWORTH, J., *Lecturer in Mathematics*
WRIGHT, W. A., BA *Mt. All., Lecturer in DIA Programme*
WYATT, J. N., BA *Texas Tech.*, LLL *Montr.*, LLM *Texas (Austin), Lecturer in Management*

YAFFEE, S. B., BA *SGW*, MBA *W. Ont., Lecturer in Management*
YORKE, R., BSc *Wolverhampton Polytechnic* MSc *Essex, Lecturer in Computer Science*

ZAROWNY, D., BSc MSc *Manit.*, MD *Lecturer in Health Education*
ZUCCARO, C., BA BComm *Loyola*, MBA *Concordia, Lecturer in Marketing*
ZWAIG-ROSSNER, Marilyn, BA *SGW*, MA *Syr., Lecturer in Education*
ZWARTS, Margriet, BA *SGW*, MA *Tor., Lecturer in English*

13 Admission Regulations

Table of Contents

13.1 ADMISSION TO CONCORDIA UNIVERSITY

13.2 CLASSIFICATION OF STUDENTS

13.3 FACULTIES

13.4 ADMISSION REQUIREMENTS
- 13.4.1 Quebec
- 13.4.2 Other Canadian Provinces
- 13.4.3 United Kingdom and Commonwealth
- 13.4.4 United States
- 13.4.5 Other Countries

13.5 APPLICATION FOR ADMISSION
- 13.5.1 Entry Dates
- 13.5.2 January Admission
- 13.5.3 Medical Examination Report
- 13.5.4 Admission Deposit

13.6 CRITERIA FOR ADMISSION
- 13.6.1 Transcripts from CEGEPs (or similar non-Quebec institutions)
- 13.6.2 Former University Transcripts (or Equivalent)
- 13.6.3 Academic Letter of Recommendation
- 13.6.4 Language Proficiency
- 13.6.5 Concordia English Language Diagnostic Test

13.7 SELECTION PROCESS AND NOTIFICATION
- 13.7.1 Early Conditional Admission
- 13.7.2 Limited Enrolment
- 13.7.3 Transfer Students

13.8 MATURE STUDENTS

13.9 ADMISSION AS AN INDEPENDENT STUDENT

13.10 THE PROCESS OF ADMISSION

13.1 Admission to Concordia University

Assistant Vice-Rector, Admissions & Liaison
DR. G.W. TAIT, S.J.

Admissions Office
Loyola Campus
GRENDON E. HAINES
Director of Admissions
INEZ McASEY
Assistant to the Director of Admissions
JOHN CARSWELL
Assistant Director of Admissions
MAUREEN JONES
Admissions Officer
IMRE MURANYI
Admissions Officer and Calendar Coordinator
RICHARD PINK
Admissions Officer

Loyola Campus
(full- and part-time students)
Admissions Office
7141 Sherbrooke Street West
Montreal, Quebec
H4B 1R6
482-0320 Local 409

The office is located at:
AD-206

Graduate Students
Graduate Studies Office
1455 de Maisonneuve West
Montreal, Quebec
H3G 1M8
879-7314
The office is located at:
Room S205
2145 MacKay Street
Montreal

Admissions Office
Sir George Williams Campus
THOMAS SWIFT
Director of Admissions
LYNNE PRENDERGAST
Assistant Director of Admissions
SALLY ANDERSON
Admissions Officer
LINDA HULL
Admissions Officer
PAULINE O'NEILL
Admissions Officer
LYNNE CAMPBELL
Coordinator of Certificate Admissions

Sir George Williams Campus
(full- and part-time students)
Admissions Office
1455 de Maisonneuve West
Montreal, Quebec
H3G 1M8
879-4280

The office is located at:
Room 220
1435 Drummond Street
Montreal

Liaison Office
Concordia University
PETER REGIMBALD
MARGUERITE BRIEN

Concordia University has one admission policy for the Loyola and Sir George Williams campuses and provides admission facilities on each for the applicants' convenience. Candidates apply to their preferred Faculty and Campus by submitting the application forms and all pertinent documents to the appropriate Admissions Office. Applicants wishing to change their Faculty or Campus do not file another application; they contact the Admissions Office to make their request. In the few programmes where quotas limit enrolment, qualified applicants who have not been approved for their preferred programme will automatically be considered for their second choice as indicated on the application reference card. If because of limited space, a change of Faculty or Campus is involved, the application will be transferred accordingly. Applications and information regarding admission requirements may be obtained by contacting the Admissions Office.

13.2 Classification of Students

1) Undergraduate Students: Undergraduate students are those who meet the full admission requirements of the University and who have been formally accepted for admission to a Faculty of the University. These students enrol in either the Day or Evening Division with the intention of completing the work required for a degree. Those admitted to degree programmes will be classified as undergraduate students whether they take several subjects or only one in any given year.

2) Mature Students: Mature students are those who are at least twenty-one years of age, who do not possess the minimum academic requirements for admission to undergraduate studies, but who have been formally admitted to a programme of study leading to an undergraduate degree, on the basis of potential to undertake such studies.

3) Certificate Students: Certificate students are those who meet the full admission requirements of the University and who have been formally admitted into a certificate programme. These students enrol in either the Day or Evening Division with the intention of completing the work required for a certificate.

4) Independent Students: Students who do not wish to proceed to a degree or certificate irrespective of the number of courses they may be following in any given year are classified as independent students. Students who register as independent students are not considered to have satisfied the undergraduate admission requirements and have no standing towards any degree at the University. If independent students are later transferred to undergraduate standing, they may receive credit towards their degree for the courses already taken, provided the courses are applicable towards the degree requirements at the time of transfer.

Students at Concordia University may attend full-time or part-time. Full-time students are those registered for 24 or more credits per academic year, or the equivalent. Part-time students are those who carry less than 24 credits per academic year, or the equivalent.

The normal full-time course load is 30 credits per year.

13.3 Faculties

Sir George Williams Faculty of Arts —Section 41

Loyola Faculty of Arts and Science —Section 51

Concordia Faculty of Commerce and Administration —Section 61

Concordia Faculty of Engineering —Section 71

Concordia Faculty of Fine Arts —Section 81

Sir George Williams Faculty of Science —Section 91

Degrees Offered

Bachelor of Arts (BA)
Bachelor of Administration (BAdmin)
Bachelor of Commerce (BComm)
Bachelor of Computer Science (BCompSc)
Bachelor of Education (BEd) — Teaching English as a Second Language
Bachelor of Engineering (BEng)
Bachelor of Fine Arts (BFA)
Bachelor of Science (BSc)

Students may be considered for admission to undergraduate programmes of 90 credits or approximately 120 credits leading to the above-mentioned degrees. The duration of the programme will be determined by the entrance qualifications.

The Bachelor of Engineering programme is not on a credit system. Reference to 90 credit and 120 credit programmes can be translated respectively into a minimum of 3 and 4 years of full-time study.

13.4 Admission Requirements
(Day and Evening Divisions)

13.4.1 QUEBEC

A) Successful completion of a two-year pre-university programme in a CEGEP, with the award of a Diploma of Collegial Studies.

B) Within this general programme, successful completion of whatever specific courses are required for entry into a given undergraduate programme. These pre-university "profiles", established through joint action of the Quebec Universities and the Department of Education of the Province, will be found in the Department of Education booklet, "Accueil 77-Structures

d'accueil aux études universitaires de premier cycle pour septembre 1977". For the convenience of applicants, requirements are listed in each Faculty section of this Calendar.

C) The completion of certain three-year technological programmes leading to a Diploma of Collegial Studies will also satisfy the requirements for admission.

13.4.2 OTHER CANADIAN PROVINCES

Non-Quebec students may be considered for admission to undergraduate programmes of 90 credits or approximately 120 credits leading to the above-mentioned degrees. The duration of the programme will be determined by the entrance qualifications.

Students from other Canadian Provinces who have completed Grade 12 with an overall average of at least 65% in appropriate subjects or the Junior Division at Memorial University, Newfoundland, will be considered for entrance into an extended undergraduate programme of approximately 120 credits. Ontario Grade 13* graduates with a minimum overall average of 65% in appropriate courses may be admitted into a 90 credit programme.

**Those applying from Grade 13 to Engineering or Computer Science (Electronics/Systems or General Science options) will, in general, require four years to obtain the degree.*

13.4.3 UNITED KINGDOM AND COMMONWEALTH

In order to be considered for admission into a 90 credit undergraduate programme, applicants must present five General Certificate of Education papers including at least two at the Advanced Level. Those wishing to enter the Faculty of Engineering, Bachelor of Engineering or Bachelor of Computer Science (General Science Option or Electronic /Systems Option) — must offer Advanced Level passes in Mathematics and Physics. Applicants to the Faculty of Science are normally expected to have Advanced Level passes in Mathematics and one Science. Candidates for admission to the Faculty of Commerce or the Bachelor of Computer Science (General Business Option) should include an Advanced Level paper in Mathematics. Any two acceptable Advanced Level papers will satisfy the requirements for admission to the Faculty of Arts or the Faculty of Fine Arts.

For entrance to the Engineering Faculty, Higher National Certificates and Diplomas with passes at an appropriate level may be accepted in lieu of Advanced Level passes.

Students with better than average results in five acceptable Ordinary Level papers plus one full year of formal schooling beyond Ordinary Level may be considered for admission to an extended undergraduate programme of approximately 120 credits.

Applicants from Hong Kong who have received the Hong Kong Certificate of Education (English) with good grades in five subjects and have completed one year of Form VI or hold the Hong Kong Certificate of Education (Chinese) with good grades in five subjects and have passed the Chinese University of Hong Kong Matriculation Examination may apply for admission to an extended undergraduate programme of approximately 120 credits.

Applicants to a four-year undergraduate programme in Engineering or the extended credit programme in Science are normally expected to have Mathematics and at least one Science subject; those applying to Commerce are advised to have Mathematics as part of their entrance qualifications.

13.4.4 UNITED STATES

High School graduates with high standards from accredited schools who have followed an academic programme designed for university entrance may apply for admission to an extended undergraduate programme of approximately 120 credits. Applicants are required to have a better than average school record and a high ranking in their graduating class. While no set pattern of courses in high school is required, all applicants are expected to have taken four units of English. Those applying for admission to Science and Engineering must include three or four units in Mathematics and two in the Sciences. At least three units of Mathematics are recommended for admission to Commerce. The Admissions Office may approve slight deviations from the above pattern.

Students who have successfully passed Advanced Placement examinations in appropriate subjects with a grade of '3' or better will be granted some advanced standing.

An applicant seeking admission on the basis of one full year of undergraduate study may qualify for admission to a three-year or 90 credit programme. Students transferring with more than one year of undergraduate study, will be considered for an appropriate level of placement within the 90 credit undergraduate programme at this University. A minimum number of courses are required to fulfill degree residence requirements. Further information may be obtained by writing to the Admissions Office.

13.4.5 OTHER COUNTRIES

The following national certificates are recognized as suitable qualifications for making application to the university provided that better than average grades have been attained. In most cases, a specific minimum overall standard on the certificate is required. More specific information with respect to admission requirements and placement levels may be obtained by writing to the Admissions Office.

ADMISSION REGULATIONS 13.4.5 ADMISSION REQUIREMENTS: OTHER COUNTRIES

Country	Certificate
Argentina	Bachillerato Universitario
Australia	Higher School Certificate or University Matriculation Certification
Belgium	Certificat d'Humanités
Czechoslovakia	Vysvedceni o Maturitni Zkousce
France	Baccalauréat (2ième partie)
Germany	Zeugnis der Reife
Greece	Apolyterion
India	Intermediate Certificate or First Year of Three Year BA, BSc, BCom (with Class I or Class II or First or Second Division standing).
Iran	Sixth Year Secondary Education Certificate
Israel	Matriculation Certificate
Italy	Diploma di Maturita Classica Diploma di Maturita Scientifica
Lebanon	Lebanese Baccalauréat (2ième partie)
The Netherlands	Getuigschrift (Gymnasium or Lyceum)
Norway	Examen Artium
Pakistan	Intermediate or Higher Secondary School Certificate (with First or Second Division standing)
Poland	Swiadlectwo Dojrzalosci
United Arab Republic	General Secondary School Certificate
Vietnam	Vietnamese Baccalauréat (2ième partie)
Yugoslavia	Chegoranctbo or Svedocanstvo
International Baccalaureat	Certificate of Baccalaureat

13.5 Application For Admission

It is recommended that application for admission be made as early as possible on forms provided by the Admissions Office. Academic certificates and other supporting documents not available at the time of application must be submitted as soon as they become available. Applicants are advised to apply early in order to allow sufficient time for evaluation and review of their application by the Admissions Office. Final dates for the receipt of applications may be obtained by contacting the Admissions Office.

13.5.1 ENTRY DATES

Students are admitted as full-time undergraduates in September and January. Part-time undergraduates are admitted in September, January, and May. Day undergraduates are also admitted to the Loyola Campus for Summer School, Day or Evening. The normal entry date for new foreign students is September.

13.5.2 JANUARY ADMISSION

Concordia University admits new students in January wherever possible. This entry date has been introduced primarily to accommodate the CEGEP December graduates but other categories of students may also apply for admission. Foreign applicants should note that new foreign students are admitted in September and not normally in January.

The maximum course load for the Winter Term (January to April) equals half of the normal load followed during the regular academic year. Students may utilize summer courses to accelerate their programme. In some programmes, entry in January may be contingent upon the student following courses during the subsequent summer session.

13.5.3 MEDICAL EXAMINATION REPORT

Each student who is admitted to full-time study must submit a medical examination report. The medical report is not required until the student has received formal notification of acceptance.

13.5.4 ADMISSION DEPOSIT

Each applicant who has been granted admission as a full-time student is required to submit a cheque or money order of $25.00 (Canadian) to confirm his intention of entering the University. This admission deposit is non-refundable, but will be applied towards tuition fees at this University.

Students who receive an early conditional acceptance but who do not successfully complete the minimum academic requirements for entrance, and are subsequently refused admission, will be refunded the admission deposit.

13.6 Criteria for Admission

13.6.1 TRANSCRIPTS FROM CEGEPs (OR SIMILAR NON-QUEBEC INSTITUTIONS)

Persons applying from CEGEP or corresponding institutions outside Quebec must have their institutions send transcripts of their records of study directly to the appropriate Admissions Office. The results of the previous semesters together with a certified list of courses being followed during the final semester must be submitted immediately. A final transcript showing the results of the final semester must also be submitted as soon as possible. Two copies of each transcript are required.

13.6.2 FORMER UNIVERSITY TRANSCRIPTS (OR EQUIVALENT)

Former university transcripts are not to be submitted by the applicant but must be sent directly to the Admissions Office from the Registrar of his/her previous university. Two copies of each transcript are required. Although an applicant's records from several institutions may be summarized on one transcript, an application will not be considered until two official transcripts from each university attended have been received. These are required even though no credit may have been earned at an institution.

13.6.3 ACADEMIC LETTER OF RECOMMENDATION

Non-Quebec applicants to full-time study must have their high school submit an academic letter of recommendation on the form provided by the University. This form is to be returned directly by the school, not by the applicant.

13.6.4 ENGLISH LANGUAGE PROFICIENCY

The University reserves the right to require any applicant to demonstrate proficiency in the English language as a criterion for admission to the University.

Applicants whose mother tongue is not English must prove their proficiency in English, as part of the criteria for admission to the University, by achieving satisfactory performance on one of the following tests:

(1) Test of English as a Foreign Language (TOEFL)
Educational Testing Service
Princeton, New Jersey, 08540, U.S.A.

(2) The University of Michigan English Language Test
English Language Institute
Testing and Certification Division
The University of Michigan
Ann Arbor, Michigan, U.S.A.

(3) Concordia English Language Diagnostic Test
(available only to applicants applying from within the Montreal area)

In the case of TOEFL or University of Michigan tests, information and application forms must be obtained by writing directly to the appropriate test centre. It is the responsibility of the applicant to arrange to sit the TOEFL or University of Michigan test and to have the results reported directly to the Admissions Office. Applicants should therefore contact the TOEFL or University of Michigan test centre as soon as possible in order that the date of receipt of the results of their test does not delay or prevent consideration of their application.

Persons applying from within the Montreal area who are required to write an English language test will be automatically scheduled to sit the Concordia English Language Diagnostic Test upon making application to the University.

An application will not be considered before the test results have been received by the Admissions Office.

Those admitted will be required on arrival to take a diagnostic test to verify their level of proficiency and to determine the nature of instruction in the English language which they will normally require. Some students may be required to take a full or part-time credit or non-credit programme in English as a Second Language.

13.6.5 CONCORDIA ENGLISH LANGUAGE DIAGNOSTIC TEST

Non-Anglophones applying from within the Montreal area must write the Concordia English Language Diagnostic Test if so determined by the Admissions Office upon receipt of their application. Applicants whose mother tongue is not English, and who have not attended four years of education in an English language secondary or post-secondary institution, are required to write the test.

The results of the test will be used to determine whether applicants have sufficient knowledge of the English language to follow their intended programmes of study. Those with acceptable academic qualifications and who have achieved satisfactory performance on the Concordia English Language Diagnostic Test will be advised of the nature of instruction in the English language which they will normally require.

Canadian applicants whose first language — or language of previous instruction — is French are not required to write an English language test unless they are applying for programmes in the Teaching of English as a Second Language. To help those unsure of their competence in the English language, the English Language Diagnostic Test is offered as a service. Students are advised to avail themselves of this testing facility. Only applicants intending to follow English lan-

ADMISSION REGULATIONS 13.6.5 CRITERIA FOR ADMISSION: CONCORDIA ENGLISH LANGUAGE DIAGNOSTIC TEST

guage courses will be required to follow the recommendations resulting from this test.

No special adjustments can be made in the case of students unable to continue in their programmes through lack of English language proficiency.

13.7 Selection Process and Notification

The University reserves the right to refuse admission to any programme even when the stated requirements for entrance have been satisfied.

Admission to undergraduate studies is based on a careful review of all credentials presented on behalf of a candidate. An application for admission is not given final consideration until all the required items have been submitted. However, the University does have an early conditional admission plan for applicants to the undergraduate programme.

13.7.1 EARLY CONDITIONAL ADMISSION

Applicants seeking admission to the undergraduate programmes may be granted a conditional acceptance on the basis of former records of study which should include mid-year results for the current year. Acceptance is contingent upon the student's successful completion of the final semester of study and upon meeting the prescribed academic admission requirements. Candidates admitted on the basis of early conditional admission are, in general, notified prior to May 15.

13.7.2 LIMITED ENROLMENT

In some programmes the number of qualified applicants may exceed the number of places available. The possession of the minimum requirements does not in itself guarantee admission to any of the programmes.

13.7.3 TRANSFER STUDENTS

An applicant who has attended another university and wishes to transfer to the undergraduate programme at Concordia should understand the following conditions:

(1) Each application for admission with advanced standing is considered on its own merit.

(2) A student will not be given credit for courses taken in another university during the same academic term in which he has registered for courses at Concordia University, unless special permission has been obtained in advance from this University.

(3) Any student who has registered at Concordia University and who wishes to take courses at another university for transfer of credit to Concordia University should contact the Admissions Office for the appropriate procedure to follow. Approval is normally required *prior* to taking courses for a transfer of credit.

(4) A student may not apply transfer credits towards the residence years at the University unless special permission has been obtained from the appropriate Faculty Council (see Residence Requirements).

13.8 Mature Students

Admission to the first year of an undergraduate programme of a minimum of 120 credits may be granted to mature applicants. Mature students may enrol as either full-time or part-time students. A Mature Applicant is defined as a candidate for admission who:

a) does not satisfy the normal academic requirements for admission, but who seeks admission on the basis of potential to undertake an undergraduate programme.

b) will be at least twenty-one years of age within the calendar year in which the programme is entered.

c) either has been out of school for twenty-four months since the age of eighteen, or has been out of school for twelve months with no unfavourable academic record in the past twenty-four months.

Out of school should be interpreted as being away from full-time study in an educational institution.

Mature students, who are twenty-five years of age or older within the calendar year in which they commence the programme, may enter a 108-credit undergraduate programme in the Faculties of Arts, Arts and Science (BA), Fine Arts, and Commerce and Administration. Those entering the Faculties of Science, Arts and Science (BSc), and Engineering will have their requirements determined in consultation with an adviser.

Students will not normally be accepted into a field of course concentration until they have successfully completed 30 credits in the programme. Courses which have been taken as part of these 30 credits and which are required courses in a given undergraduate programme will be replaced by electives within the discipline or field.

Each application will be considered on its own merit. A birth certificate or other acceptable proof of age must be submitted together with all former records of study and any other documentation which may demonstrate potential to undertake undergraduate work.

13.9 Admission as an Independent Student

Those who satisfy the University admission requirements regardless of their age are eligible to register as independent students. University entrance requirements are expected, but may be waived, for independent students who will be at least twenty-one years of age in the calendar year in which they register and who have, through other experiences, the essential background for the course or courses. Nevertheless, the University reserves the right of decision as to the independent student's eligibility and, in certain cases, the right to ask for proof of appropriate University entrance requirements.

While independent students following single courses of interest are encouraged to enrol, priority will be given to students proceeding to a degree. Students should contact the Admissions Office for the proper procedure to follow.

13.10 The Process of Admission

How to Apply

Submit an application for admission to the appropriate Admissions Office as soon as possible.

It is the responsibility of the applicant to insure that all the supporting documents are submitted as an application cannot be considered for admission until it is complete.

Enclose with your completed application forms all documents that are now available. You should submit copies of your High School Leaving Certificate which must include a certified list of final marks in each subject, if applicable. Readable photocopies are acceptable. Former CEGEP or university transcripts are not to be submitted by you but must be sent directly to the Admissions Office by the Registrar of your previous institution.

Applicants presenting Certificates in a language other than English and French:

(1) You are required to submit:

(a) the original certificate or, preferably, notarized photostatic copies of these certificates.

(b) notarized English translation of these certificates.

(2) When the certificates do not include the subjects and the grades achieved in the individual subjects, you must submit certified statements from authorized officials of the institutions attended, or submit statutory declarations giving the required information.

14 Mature Student Programmes

Table of Contents

14.1 MATURE STUDENT PROGRAMME —GENERAL INFORMATION

14.2 ADMISSION TO THE MATURE STUDENT PROGRAMME

14.3 STRUCTURE OF STUDIES—MATURE STUDENT PROGRAMME (UNDER 25 YEARS OF AGE)

14.3.1 Pre-Arts—Sir George Williams Faculty of Arts
14.3.2 Pre-Arts—Loyola Faculty of Arts and Science
14.3.3 Pre-Science—Loyola Faculty of Arts and Science
14.3.4 Pre-Commerce and Administration—Concordia
14.3.5 Pre-Engineering—Concordia
14.3.6 Pre-Computer Science (SGW)
14.3.7 Pre-Fine Arts—Concordia
14.3.8 Pre-Science—Sir George Williams Faculty of Science

14.4 STRUCTURE OF STUDIES—MATURE ENTRY PLAN (OVER 25 YEARS OF AGE)

14.4.1 Science, Engineering and Computer Science
14.4.2 Arts, Commerce and Administration, and Fine Arts

14.5 COURSES

14.5.1 Sir George Williams Faculty of Arts
14.5.2 Loyola Faculty of Arts and Science
14.5.3 Concordia Faculty of Commerce and Administration
14.5.4 Concordia Faculty of Engineering
14.5.5 Concordia Faculty of Fine Arts
14.5.6 Sir George Williams Faculty of Science

14.6 INDEPENDENT COURSE STUDENTS

14.1 Mature Student Programme General Information

In keeping with the traditional policy of the University towards older students, the Mature Student Programme is designed to enable individuals who are twenty-one years of age or older, and who have not satisfied the normal admission requirements, but have demonstrated potential, to take undergraduate programmes. The University assumes that the age of the students will have allowed them to acquire informally some of the general education given to younger students at the collegial level, and as a result the Mature Student Programme concentrates on the knowledge and skills which will be needed to undertake a given programme of specialization.

Successful completion of a specified number of credits will be required in addition to those required of students entering with a Diploma of Collegial Studies or the equivalent. While they are obtaining these additional credits, mature students are considered in every way to be undergraduates.

Twenty-Five-Year Mature Entry (25 Years of Age and Over)

There is a special Mature Entry Plan for applicants 25 years of age and over, or who reach their twenty-fifth birthday in the calendar year in which they seek to enter the University.

Administrative Structure

For identification purposes within the University, students will be classified in one of the following categories — Pre-Arts, Pre-Commerce and Administration, Pre-Computer Science, Pre-Engineering, Pre-Fine Arts, Pre-Science. There is no separate administrative structure for the Mature Student Programme. Each Faculty is responsible for its students' programmes.

14.2 Admission to the Mature Student Programme

For detailed information on Admissions, please refer to § 13.

A mature applicant is defined as a candidate for admission who:

a) does not satisfy the normal academic requirements for admission, but who seeks admission on the basis of potential to undertake an undergraduate programme.

b) will be at least twenty-one years of age within the calendar year in which the programme is entered.

c) has *either* been out of school for twenty-four months since the age of eighteen, *or* has been out of school for twelve months with no unfavourable academic record in the past twenty-four months. "Out of School" should be interpreted as not being registered for full-time study in an educational institution.

Students will not be accepted into a field of concentration or specialization until they have successfully completed 30 credits. Courses which have been taken as part of these 30 credits and which are required courses in a given degree programme, or specialization within that programme, will be replaced in that programme by electives within the discipline or field.

Each application will be considered on its own merits. A birth certificate or other acceptable proof of age must be submitted together with all former records of study and any other documentation which may demonstrate potential to undertake undergraduate work.

Twenty-Five Year Mature Entry (25 Years of Age and Over)

Mature applicants who are twenty-five years of age or older within the calendar year in which they commence the programme may enter a modified Mature programme, requiring 18 additional credits in the Faculties of Arts, Arts and Science (BA), Fine Arts, And Commerce and Administration, while those entering the Faculties of Science, Arts and Science (BSc), and Engineering will have their requirements determined in consultation with an adviser.

Transfer To The Mature Entry Programme

Students registered in the Mature Student Programme have the option on reaching their 25th birthday of profiting, within their first 30 credits, from the provisions of the Twenty-Five Year Mature Entry Plan.

14.3 Structure of Studies—Mature Student Programme (Under 25 Years of age)

For students in the Mature Student Programme, the additional credits are either specified as prerequisites, or otherwise determined by each individual Faculty. These additional credits may not be counted towards the student's eventual programme of specialization. Since a small number of programmes are subject to enrolment restrictions, the University cannot guarantee a student acceptance into a given programme of specialization of the student's choice on completion of the additional credits.

The additional credits will be made up of required courses and electives, these requirements being as follows:

14.3.1 PRE-ARTS—SIR GEORGE WILLIAMS FACULTY OF ARTS

General Requirements:

6 credits in English (Language or literature)
24 credits (of which a maximum of 12 may be outside the Arts Faculty)

Specific Requirements for Entry to Programmes of Specialization in Arts:

NOTE: For course description see § 41.
Applied Social Science, Geography:
6 credits in Mathematics

German, Greek, Hebrew, Italian, Latin, Russian, Spanish:
6 credits (at least) and
12 credits (preferably) in the language(s) to be studied

Mathematics:
9 credits in Mathematics 103[3], 105[3], 205[3]

Psychology:
6 credits in Mathematics
3 credits in Biology 101[3]
6 credits in Psychology 111[6]

NOTE: All other programmes have no specific requirements.

14.3.2 PRE-ARTS—LOYOLA FACULTY OF ARTS AND SCIENCE

General Requirements:

6 credits in English
6 credits in Mathematics or Natural Science
18 Elective credits

Specific Requirements for Entry to Programmes of Specialization in Arts:

NOTE: For course description see § 51.
German, Italian, Russian, Spanish:
6 (at least)
credits in the language(s) to be studied.

Mathematics:
9 credits in Mathematics 215A/B[3], 216A/B[3], 217A/B[3]

Psychology:
3 credits in Biology 201A/B[3]
3 credits in Mathematics 215A/B[3]
6 credits in Psychology L200[6]

14.3.3 PRE-SCIENCE*—LOYOLA FACULTY OF ARTS AND SCIENCE

Specific Requirements for Entry to Programmes of Specialization in Science:

NOTE: For course description see § 51.
NOTE: The sequence of taking the courses listed below will be decided in consultation with the Chairman of the department of intended specialization.

Biology and Bio-Physical Education:
3 credits in Biology 201A/B[3]
6 credits in Chemistry 210Z[6]
6 credits in Mathematics 215A/B[3], 216A/B[3]
6 credits in Physics 201Z[6]
9 Elective credits

Chemistry, Mathematics and Physics:
6 credits in Chemistry 210Z[6]
9 credits in Mathematics 215A/B[3], 216A/B[3], 217A/B[3]
6 credits in Physics 201Z[6]
9 Elective credits

Computer Science:
6 credits in Computer Science 211[3], 241[3]
9 credits in Mathematics 215A/B[3], 216A/B[3], 217A/B[3]
15 Elective credits

Psychology:
3 credits in Biology 201A/B[3]
6 credits in Chemistry 210Z[6]
9 credits in Mathematics 215A/B[3], 216A/B[3], 217A/B[3]
6 credits in Physics 201Z[6]
6 Elective credits

**It is recommended that a Mathematics course be taken during the summer prior to registration. Please consult the Department Chairman.*

14.3.4 PRE-COMMERCE AND ADMINISTRATION—CONCORDIA

General Requirements:

6 credits in Mathematics 108[3], 109[3] (SGW Campus)
or in Mathematics 310[6] (Loyola Campus — see § 51.19.3)
6 credits in Humanities or Social Science
12 Elective credits

NOTE: Candidates entering Pre-Commerce and Administration without high school Intermediate Mathematics (Functions) must also take Mathematics 101[3] (SGW) or Mathematics 111A/B[3] (Loyola—see § 51.19) which will function as a 3-credit elective.
Pre-Commerce and Administration students are advised to select Economics 109[3] and 110[3] (SGW) or Economics 300[6] (Loyola—see § 51.10).

14.3.5 PRE-ENGINEERING—CONCORDIA

General Requirements:

33 credits chosen as below:

SGW Campus	*Loyola Campus*
Chemistry 101[3] } Chemistry 102[3] }	Chemistry 210[6]

MATURE STUDENT PROGRAMME 14.3.5 STRUCTURE OF STUDIES—MATURE STUDENT PROGRAMME: PRE-ENGINEERING —CONCORDIA

Computer Science 111[3]	Computer Science 211[3]
	Computer Science 241[3]
Mathematics 102[3]	Mathematics 213[3]
Mathematics 103[3]	Mathematics 246[3]
Mathematics 104[3]	Mathematics 223[3]
Mathematics 105[3]	Mathematics 248[3]
Physics 104[3] & 124[1] / Physics 105[3] & 125[1]	Physics 201[6]
Physics 106[3] & 126[1]	Physics 203[3]

14.3.6 PRE-COMPUTER SCIENCE—SIR GEORGE WILLIAMS*

General Requirements:

General Science and Electronics/Systems Options:

Same as for Pre-Engineering

General Business Option:

3 credits in Computer Science 111[3]
15 credits in Mathematics 102[3], 103[3], 104[3], 105[3], 106[3]
12 Elective credits (chosen from outside the Faculty of Commerce and Administration and the Department of Computer Science)

**For Computer Science in the Loyola Faculty of Arts and Science, see 14.3.3*

14.3.7 PRE-FINE ARTS—CONCORDIA

General Requirements:

6 credits in English (language is recommended)
24 Elective credits

NOTE: Students may complete courses which are part of their Major in an MSP programme. In such cases it will be the responsibility of the student in consultation with an adviser to select additional courses which will fulfill the requirements of the Major and the Bachelor of Fine Arts degree.

Specific Requirements for Programmes of Specialization:

Cinema

6 credits in English (in addition to the general requirement)
6 credits in French
12 Elective credits

Art Education, Art History and Studio Art, Graphic Design, Studio Art:

6 credits in Art C200[6]
6 credits in design C200[6]
6 credits in art history C240[6]
6 credits chosen from art history C232[6], C249[6], Cinema C211[6], Music History C200[6], Theatre C300[6] or 6-credit elective

Art History

6 credits in Art History C240[6]
6 credits in Art C200[6]
12 Elective credits

Music

The following courses are recommended:
3 credits in Music C221[3]
3 credits in Music C222[3]
6 credits in Integrative Music Studies C200[6]
12 Elective credits

Drama, Drama in Education, Theatre Performance:

The following courses are recommended:
3 credits in Theatre C201[3] Scenography C201[3]
6 credits in Theatre C300[6] or Dramatic Literature
15 Elective credits

Theatre Scenography:

The following courses are recommended:
3 credits in Theatre C201[3] or Scenography C201[3]
6 credits in Theatre C300[6] or Dramatic Literature
6 credits in Art C200[6]
9 Elective credits

14.3.8 PRE-SCIENCE—SIR GEORGE WILLIAMS FACULTY OF SCIENCE

General Requirements:

6 credits in Chemistry N-201[3], N-202[3]
12 credits in Mathematics n-202[3], N-203[3], N-204[3], N-205[3]
8 credits in Physics N-204[3], N-205[3], N-224[1], N-225[1]
3-4 credits in Physics N-206[3], and N-226[1], or Biology N-201[3] or Geology N-215[3]

**Students not having the equivalent of Mathematics N-201[3] will take that course in place of N-202[3].*

14.4 Structure of Studies—Mature Entry Plan (Over 25 Years of Age)

14.4.1 SCIENCE, ENGINEERING AND COMPUTER SCIENCE

General Requirements:

Persons entering Science, Engineering and Computer Science may be permitted to seek exemptions from part or all of the qualifying part of the programme on the basis of their knowledge. In the case of the General Business Option in the Bachelor of Computer Science programme, this involves the Mathematics courses normally required for entry to that programme.

Engineering and Computer Science will offer a special testing programme to establish exemptions. Science will interview and/or test candidates to determine exemptions.

14.4.2 ARTS, COMMERCE AND ADMINISTRATION, AND FINE ARTS

General Requirements:

Arts:

6 credits in English (language or literature)
12 Elective credits

Commerce and Administration:

6 credits in Mathematics (College Algebra and Calculus I)
12 Elective credits

Fine Arts:

6 credits in English (language or literature)
12 Elective credits

NOTE: Candidates entering Pre-Commerce and Administration without high school Inter-

mediate Mathematics (Functions) must also take Functions which course will count as an elective. Pre-Commerce and Administration students are advised to select Introductory Economics and a course from the Social Sciences to complete the 18-credit profile.

14.5 Courses

The courses listed below are offered by the respective Faculties. Inclusion of a course in this list does not guarantee that it will be given every year.

14.5.1 SIR GEORGE WILLIAMS FACULTY OF ARTS

Courses are grouped under the respective headings of Centre for Interdisciplinary Studies, Humanities and Social Sciences.
NOTE: For full course descriptions, refer to the section indicated.

Centre For Interdisciplinary Studies § 41.5

The following courses may be accepted as either Humanities or Social Science credits.

CANADIAN STUDIES 111 (S211)
Introduction to Canadian Studies.
(6 credits)

SCIENCE AND HUMAN AFFAIRS 101 (S201)
Introduction to Science and Human Affairs I
(3 credits)

SCIENCE AND HUMAN AFFAIRS 102 (S202)
Introduction to Science and Human Affairs II
(3 credits)

SCIENCE AND HUMAN AFFAIRS 110
Contemporary Image of Science I:
The Physical Sciences
This course provides a general humanistic understanding of the physical sciences. The three main themes are man and the universe; the reality and unreality of matter and energy; man and the dynamic earth. (6 credits) *NOTE: Students who have credits for Natural Science 210 or Humanities of Science 010 or 210 may not take this course for credits.*

SCIENCE AND HUMAN AFFAIRS 112
Contemporary Image of Science II:
The Biological Sciences
This course provides a general humanistic understanding of the biological sciences. The three main themes are biology and evolutionary theory; evolution of life and man; man, ecology and society. (6 credits) *NOTE: Students who have credits for Natural Science 210 or Humanities of Science 010 or 210 may not take this course for credits.*

SCIENCE AND HUMAN AFFAIRS 121 (S221)
Environmental Issues I
(3 credits)

SCIENCE AND HUMAN AFFAIRS 122 (S222)
Environmental Issues II
(3 credits)

HUMANITIES

Classics § 41.8

ANCIENT GREEK 110 (S210)
Introductory Course in Greek
(6 credits)

ANCIENT GREEK 141 (S241)
Ancient Greek Language and Literature
(6 credits)

CLASSICS/HISTORY 112 (S212)
History of Greece and Rome
(6 credits)

CLASSICS/HISTORY 114 (S214)
History of the Roman Empire
(6 credits)

CLASSICS 141 (S241)
Greek Literature in Translation
(3 credits)

CLASSICS 142 (S242)
Latin Literature in Translation
(3 credits)

LATIN 110 (S210)
Beginner's Latin
(6 credits)

LATIN 140 (S240)
Latin Composition and Translation
(6 credits)

LATIN 141 (S341)
Latin Literature
(6 credits)

Modern Languages § 41.8

LITERATURE IN TRANSLATION 150 (S350)
Literature in Translation
(6 credits)

GERMAN 110 (S210)
Introductory Course in German
(6 credits)

GERMAN 111 (S311)
Advanced German Language and Stylistics
(6 credits)

GERMAN 115 (S215)
German for Reading Knowledge
(6 credits)

GERMAN 141 (S241)
German Language and Literature
(Intermediate)
(6 credits)

HEBREW 110 (S210)
Introductory Course in Hebrew
(6 credits)

HEBREW 141 (S241)
Intermediate Course in Hebrew
(6 credits)

ITALIAN 110 (S210)
Introductory Course in Italian
(6 credits)

ITALIAN 121 (S221)
Italian Civilization
(6 credits)

ITALIAN 141 (S241)
Intermediate Italian
(6 credits)

RUSSIAN 110 (S210)
Introductory Course in Russian
(6 credits)

RUSSIAN 115 (S215)
Reading Course in Russian
(6 credits)

RUSSIAN 131 (S311)
Advanced Russian Language and Stylistics
(6 credits)

RUSSIAN 141 (S241)
Intermediate Russian
(6 credits)

SPANISH 101 (S201)
Introduction to Spanish I
(3 credits)

SPANISH 102 (S202)
Introduction to Spanish II
(3 credits)

SPANISH 121 (S221)
Spanish Civilization
(6 credits)

SPANISH 122 (S222)
Cultural Aspects of Latin America
(6 credits)

SPANISH 131 (S311)
Advanced Spanish, Composition and Stylistics
Prerequisite: Spanish 141 (N-241)
(6 credits)

SPANISH 141 (S241)
Spanish Language and Literature
(Intermediate)
(6 credits)

Linguistics § 41.8

LINGUISTICS 121 (S221)
Introduction to Linguistics
(6 credits)

English § 41.9

ENGLISH 105 (131)
Basic Language Skills—Stage I
A course in English composition for students who need basic training in written and spoken English. Emphasis will be placed on grammar, sentence structure and other fundamentals of good usage. (3 credits)
NOTE: Students who have taken English 131 may not take this course for credits.

ENGLISH 106 (132)
Basic Language Skills—Stage II
A course in language skills and research techniques for students who need basic training in the preparation of effective reports, term papers and other written accounts of their work for business and academic purposes. (3 credits)
NOTE: Students who have taken English 132 may not take this course for credits.

ENGLISH 111 (S211)
English Composition
This course is designed to help the students to develop skills in writing, research, and documentation, so that they may be able to prepare written accounts of their work clearly, concisely, and in a logically organized way. (6 credits)

ENGLISH 121
Introduction to English Literature
This course in the development of English Literature will introduce the student to a selection of works from Chaucer to the present. (6 credits)
NOTE: Students who plan to take a Major or Honours programme in English are strongly urged to take English 121.

ENGLISH 133
The Novel and the Short Story
Selections for study will be grouped around some major theme or idea of particular relevance to the world today. Specific themes and reading lists will be chosen by individual instructors. (3 credits)

ENGLISH 134
Drama and Poetry
Selections for study will be grouped around some central theme of particular relevance to life in the present age. Specific themes and reading lists will be chosen by individual instructors. (3 credits)

ENGLISH 161 (S231)
Introduction to Poetry
(3 credits)

ENGLISH 166 (S232)
Short Fiction
(3 credits)

English as a Second Language § 41.6

ESL 100
English Language
A course for students whose first language is other than English and who require additional training in order to achieve a level of expression acceptable to the university. The focus of the course is primarily on the development and improvement of writing skills. All candidates will be tested prior to entry. (6 credits)

ESL 101 (S201)
English Language and Composition
(6 credits)

French § 41.10

FRENCH 101 (S201)
Beginners' French (Language I)
(6 crédits)

FRANÇAIS 110 (S310)
Composition avancée I
(6 crédits)

FRANÇAIS 111 (S211)
Langue II et composition élémentaire
(6 crédits)

FRANÇAIS 113 (S313)
La phonétique française
(3 crédits)

FRANÇAIS 114 (S214)
Langue III et composition
(6 crédits)

FRANÇAIS 121 (S321)
Panorama de la littérature française
(6 crédits)

FRANÇAIS 122 (S222)
La littérature française moderne
(6 crédits)

FRANÇAIS 131 (S331)
Littérature et culture québécoise
(6 crédits)

FRANÇAIS 141 (S241)
Introduction à l'histoire de la culture et de la civilisation française
(6 crédits)

Humanities

HUMANITIES 110
General Course in Humanities
It is the purpose of this course to enlarge and enrich the student's comprehension of his cultural heritage by the study of man as a unique creative being. The sources for this study of man are drawn primarily from the fields of history, philosophy, religion, literature and the arts with a view toward examining those experiences and ideas of enduring power which have shaped the nature of modern man from the age of Greece to the present century. (6 credits)

Philosophy § 41.12

PHILOSOPHY 110 (S210)
Problems of Philosophy
(6 credits)

PHILOSOPHY 111 (S211)
Philosophical Classics
(6 credits)

PHILOSOPHY 121 (S221)
Introduction to Logic
(6 credits)

PHILOSOPHY 131 (S231)
Problems of Morals
(6 credits)

PHILOSOPHY 171 (S271)
Contemporary Philosophy
(6 credits)

PHILOSOPHY 173 (S273)
Existentialism
(6 credits)

Religion § 41.13

RELIGION 111 (S211)
Understanding Religion
(6 credits)

RELIGION 113 (S213)
Major Religious Traditions of the World
(6 credits)

RELIGION 122 (S222)
Judaic Studies: History of the Jewish People
(6 credits)

RELIGION 129 (S329)
Sefardic Judaism
(3 credits)

RELIGION 130 (S331)
Contemporary Ethical Issues: Personal
(3 credits)

RELIGION 132 (S332)
Contemporary Ethical Issues: Societal
(3 credits)

RELIGION 133 (S333)
Women and Religion I
(3 credits)

RELIGION 134 (S334)
Women and Religion II
(3 credits)

RELIGION 140 (S341)
Religion and Literature
(6 credits)

RELIGION 151 (S301)
Biblical Studies I: The Hebrew Bible
(3 credits)

RELIGION 152 (S302)
Biblical Studies II: The New Testament
(3 credits)

SOCIAL SCIENCES

Anthropology § 41.21.4

ANTHROPOLOGY 111 (S211)
Introduction to Anthropology
(6 credits)

Economics § 41.15

ECONOMICS 109 (S209)
Introduction to Microeconomics
(3 credits)

ECONOMICS 110 (S210)
Introduction to Macroeconomics
(3 credits)

ECONOMICS 130 (S221)
Introduction to Economic History
(6 credits)

Education § 41.16

EDUCATION 101 (S201)
The Nature and Function of Teaching

EDUCATION 110 (S210)
Psychology of Education

EDUCATION 130 (S230)
Introduction to the Philosophy of Education

Geography § 41.17

GEOGRAPHY 101
The Ecology of Man
A general introduction to the relationship between physical and cultural distributions of the earth's surface. Global pattern of human economic and natural resources will be examined. (6 credits)
NOTE: (Not offered in 1976-77)

GEOGRAPHY 111 (N-211)
Introduction to Human Geography
(6 credits)

GEOGRAPHY/INTERDISCIPLINARY STUDIES 112 (S212)
Early Man
(6 credits)

GEOGRAPHY 160 (S260)
Introduction to Cartography I
(3 credits)

GEOGRAPHY 161 (N-261)
Introduction to Cartography II
(3 credits)

GEOGRAPHY 171 (S271)
The Natural Environment
(6 credits)

GEOGRAPHY 173 (N-273)
The Sea
(6 credits)

History § 41.18

HISTORY 110 (S210)
History of Europe in the Modern World
(6 credits)

HISTORY/CLASSICS 112 (S212)
History of Greece and Rome
(6 credits)

HISTORY/CLASSICS 114 (S214)
History of the Roman Empire
(6 credits)

HISTORY 121 (S221)
History of Canada
(6 credits)

HISTORY 151 (S251)
History of the United States
(6 credits)

HISTORY 161 (S261)
History of Asia
(6 credits)

HISTORY 181 (S281)
Historical Perspectives on Contemporary Issues
(6 credits)

Political Science § 41.19

POLITICAL SCIENCE 130 (S330)
Government and Politics of Canada
(6 credits)

POLITICAL SCIENCE 131 (S231)
Public law
(6 credits)

POLITICAL SCIENCE 140 (S240)
Comparative Politics
(6 credits)

POLITICAL SCIENCE 170 (S270)
International Relations
(6 credits)

Psychology § 41.20

PSYCHOLOGY 111 (S211)
Introductory Psychology
(6 credits)

Social Science

SOCIAL SCIENCE 110
General Course in the Social Sciences

This course has a dual purpose: to introduce the student to some of the basic concepts and subject matter of the various social sciences and to demonstrate their interrelation; and to provide the student with some knowledge of contemporary society and the social problems which confront it. (6 credits)

Sociology § 41.21

SOCIOLOGY 111 (S210)
Introduction to Sociology
(6 credits)

14.5.2 LOYOLA FACULTY OF ARTS AND SCIENCE

NOTE: For full course descriptions, refer to the section indicated.

Andragogy § 51.3
ANDRAGOGY L200
Introduction to Adult and Continuing Education
(6 credits)

Biology § 51.4
BIOLOGY 201A/B
Introduction to Biology
(3 credits)

BIOLOGY 300Z
Fundamentals of Human Biology
(6 credits)

BIOLOGY 304Z
Concepts of Modern Biology
(6 credits)

BIOLOGY 331A
Environmental Biology I
(3 credits)

BIOLOGY 333B
Environmental Biology II
(3 credits)

BIOLOGY 335A/B
Elementary Genetics
(3 credits)

BIOLOGY 341A
Fundamental Nutrition
(3 credits)

BIOLOGY 343B
Applied Nutrition
(3 credits)

Bio-Physical Education § 51.5
BIO-PHYSICAL EDUCATION L201
Philosophical and Sociological Foundations of Health, Physical Education and Recreation
(3 credits)

BIO-PHYSICAL EDUCATION L211
Introduction to Motor Learning
(3 credits)

BIO-PHYSICAL EDUCATION L241
Recreation and Leisure in Contemporary Society
(3 credits)

BIO-PHYSICAL EDUCATION L251
Sports Science
(3 credits)

Chemistry § 51.6
CHEMISTRY 210Z
General Chemistry
(6 credits)

CHEMISTRY 300Z
Concepts in Science
(6 credits)

Classics § 51.7
Literature
CLASSICS L211
The Beginnings of European Literature (Greek Literature)
(3 credits)

CLASSICS L212
The Beginnings of European Literature (Latin Literature)
(3 credits)

CLASSICS L220
Greek Drama: Theatre and Democracy in Fifth Century Athens
(6 credits)

CLASSICS L222
The Comic Art
(3 credits)

CLASSICS L224
Homer and The Epic Hero - I
(3 credits)

CLASSICS L225
Homer and The Epic Hero - II
(3 credits)

History
CLASSICS L230
The Ancient Near East - I
(3 credits)
CLASSICS L231
The Ancient Near East - II
(3 credits)
CLASSICS L240
Greek History
(3 credits)
CLASSICS L241
Roman History
(3 credits)

Culture and Civilization
CLASSICS L250
Greeks and the After Life
(3 credits)
CLASSICS L251
Romans and the After Life
(3 credits)
CLASSICS L252
Love, Hate and Friendship in the Classical World - I
(3 credits)
CLASSICS L253
Love, Hate and Friendship in the Classical World - II
(3 credits)
CLASSICS L254
Women in Classical Antiquity
(6 credits)
CLASSICS L256
A Comparative Study of Judaic and Greek Traditions
(6 credits)
CLASSICS L260
Myth and Mythmaking
(6 credits)
CLASSICS L262
Chinese Myths
(3 credits)
CLASSICS L264
An Introduction to Archaeology
(3 credits)
CLASSICS L265
Greek and Roman Art and Archaeology
(3 credits)
CLASSICS L266
Civilization, Barbarism and Savagery
(3 credits)
CLASSICS L268
Mesoamerican Archaeology
(3 credits)
CLASSICS L269
South American Archaeology
(3 credits)

Classical Philology
CLASSICS L270
Elementary Hebrew
(6 credits)
CLASSICS L272
An Introduction to Biblical Hebrew
(6 credits)
CLASSICS L280
Elementary Greek
(6 credits)
CLASSICS L290
Elementary Latin
(6 credits)

Computer Science § 51.9
COMPUTER SCIENCE 211
Introduction to Scientific Computing
(3 credits)
COMPUTER SCIENCE 221
Introduction to Business Computing
(3 credits)
COMPUTER SCIENCE 301
Computers in Society
(3 credits)

Economics § 51.10
ECONOMICS L202
Principles of Economics
(6 credits)
ECONOMICS L209
Introduction to Microeconomics
(3 credits)
ECONOMICS L210
Introduction to Macroeconomics
(3 credits)

English § 51.11
ENGLISH L200
Introduction to Literature and Composition
(6 credits)
ENGLISH L204
Essay Writing
(6 credits)
ENGLISH L205
Style in Writing
(3 credits)
ENGLISH L212
Shakespeare
(6 credits)
ENGLISH L223
Modern American Fiction
(3 credits)
ENGLISH L225
Contemporary American Fiction
(3 credits)
ENGLISH L233
Canadian Literature I
(3 credits)
ENGLISH L235
Canadian Literature II
(3 credits)
ENGLISH L256
The Short Story
(6 credits)

French § 51.12
Language
FRENCH L200
Basic French
(6 credits)
FRENCH L201
Elementary I
(6 credits)
FRENCH L202
Elementary II
(6 credits)
FRENCH L303
L'art de vivre au Québec I
(6 crédits)
FRENCH L304
Intermediate I
(6 credits)
FRENCH L305
L'art de vivre au Québec II
(6 crédits)

MATURE STUDENT PROGRAMME 14.5.2 COURSES: LOYOLA FACULTY OF ARTS AND SCIENCE

FRENCH L306
Intermediate II
(6 credits)

FRENCH L307
French for Community Health Services I
(3 credits)

FRENCH L308
French for Community Health Services II
(3 credits)

FRENCH L309
French used in Physical Education and sports
(3 credits)

FRENCH L311
French for Recreology
(3 credits)

FRENCH L313
French for Social Sciences I
(3 credits)

FRENCH L314
French for Social Sciences II
(3 credits)

FRENCH L315
French for Industry I
(3 credits)

FRENCH L316
French for Industry II
(3 credits)

FRENCH L317
French for Library Studies I
(3 credits)

FRENCH L318
French for Library Studies II
(3 credits)

FRENCH L319
French for Commerce I
(3 credits)

FRENCH L320
French for Commerce II
(3 credits)

FRENCH L322
Français oral avancé
(6 crédits)

FRENCH L324
Problèmes fondamentaux de l'écrit pratique
(6 crédits)

FRENCH L331
L'art de parler en public I
(3 crédits)

FRENCH L332
L'art de parler en public II
(3 crédits)

FRENCH L333
Initiation à la terminologie du droit I
(3 crédits)

FRENCH L334
Initiation à la terminologie du droit II
(3 crédits)

FRENCH L336
Cours avancé de langue et civilisation
(6 crédits)

FRENCH L338
Cours avancé de la langue des affaires
(6 crédits)

FRENCH L352
Ressources stylistiques du français
(6 crédits)

FRENCH L428
Histoire de la langue et linguistique
(6 crédits)

FRENCH L438
Principes de la linguistique appliquée
(6 crédits)

FRENCH L448
Pédagogie de l'audio-visuel
(6 crédits)

FRENCH L452
Stylistique et traduction
(6 crédits)

Literature

FRENCH L210
Introduction aux études littéraires
(6 crédits)

FRENCH L396
Littérature comparée - Comparative Literature
Littératures canadiennes - Canadian Literatures
(6 credits)

Geography § 51.13

GEOGRAPHY L200
Foundations of Geography: Environment and Man
(6 credits)

GEOGRAPHY L215
Cultural Geography I: Man The Hunter
(3 credits)

GEOGRAPHY L216
Cultural Geography II: Man's Rise to Civilization
(3 credits)

GEOGRAPHY L265
Maps and the Presentation of Statistical Data I
(3 credits)

GEOGRAPHY L266
Maps and the Presentation of Statistical Data II
(3 credits)

GEOGRAPHY L275
Climate and the Biosphere
(3 credits)

GEOGRAPHY L276
Landforms and the Biosphere
(3 credits)

Geology § 51.14

GEOLOGY 201A
Physical Geology
(3 credits)

GEOLOGY 202B
Elementary History of Earth
(3 credits)

GEOLOGY 203Y
Introductory Laboratory Course in Geology
(3 credits)

GEOLOGY 205A
Environmental Geology
(3 credits)

GEOLOGY 206B
Continental Drift
(3 credits)

GEOLOGY 207A
Geology of Resources
(3 credits)

GEOLOGY 221B
Physical Oceanography
(3 credits)

Health Education § 51.15
HEALTH L201
Cell Functions in Health and Disease
(6 credits)
HEALTH L206
Applied Human Physiology
(6 credits)
HEALTH L208
Nutrition in the 70's
(6 credits)
HEALTH L209
Personal Interrelations
(6 credits)
HEALTH L251
Hunger in the Classroom: The School's Role
(6 credits)

History § 51.16
HISTORY L200
The Nature and Practice of History
(3 credits)
HISTORY L201
Introduction to European History, 1400-1789
(3 credits)
HISTORY L202
Introduction to European History, 1789-present
(3 credits)
HISTORY L203
History of Canada, Pre-Confederation
(3 credits)
HISTORY L205
History of Canada, Post-Confederation
(3 credits)
HISTORY L206
History of Quebec
(6 credits)
HISTORY L211
History of the United States, to 1877
(3 credits)
HISTORY L213
History of the United States, since 1877
(3 credits)
HISTORY L240
History of England, 1485 to the Present
(6 credits)

Interdisciplinary Studies § 51.17
INTE L201
Concepts in Science
(6 credits)
INTE L204
Aesthetics: An Interdisciplinary Approach
(6 credits)
INTE L212
Introduction to the Methods of the Humanities and Social Sciences
(6 credits)
INTE L220
Comparative Literature
(6 credits)
INTE L221
Women in Christianity
(6 credits)
INTE L224
Comparative Literature - Canadian Literatures
(6 credits)
INTE L226
Alienation - English and French Canadian Literature
(6 credits)
INTE L230
Environmental Studies
(6 credits)
INTE L236
The Technological Society
(6 credits)
INTE L250
An Introduction to the Third World
(6 credits)
INTE L264
Scientists and the State
(6 credits)
INTE L270
Science and the Arts, a dialogue: "Three Quarks for Muster Mark"
(6 credits)
INTE L272
Astronomy, Cosmology and the Space Age
(6 credits)

Library Studies § 51.18
LIBRARY L201
Principles of Library Service
(3 credits)
LIBRARY L202
Organization of Library Services
(3 credits)

Mathematics § 51.19
MATHEMATICS 200A/B
Ideas in Mathematics
(3 credits)
MATHEMATICS 202A/B
Ideas in Mathematics
(3 credits)
MATHEMATICS 213A/B
Intermediate Algebra
(3 credits)
MATHEMATICS 214A/B
Elementary Functions and Analytic Geometry
(3 credits)
MATHEMATICS 215A/B
Calculus I
(3 credits)
MATHEMATICS 216A/B
Calculus II
(3 credits)
MATHEMATICS 217A/B
Vectors and Analytic Geometry
(3 credits)
MATHEMATICS 310Z
Mathematics for the Social and Management Sciences
(6 credits)

Modern Languages § 51.20
GERMAN L200
Introduction to German Studies I
(3 credits)
GERMAN L201
Introduction to German Studies II
(3 credits)
GERMAN L202
Elementary German I
(3 credits)
GERMAN L203
Elementary German II
(3 credits)
GERMAN L206
Reading German and Introduction to Translation I
(3 credits)

GERMAN L207
Reading German and Introduction to Translation II
(3 credits)

GERMAN L208
Intermediate German I
(3 credits)

GERMAN L209
Intermediate German II
(3 credits)

GERMAN L270
Advanced Composition and Stylistics I
(3 credits)

GERMAN L271
Advanced Composition and Stylistics II
(3 credits)

GERMAN L276
German Translation I
(3 credits)

GERMAN L277
German Translation II
(3 credits)

GERMAN L480
Tutorial I
(3 credits)

GERMAN L481
Tutorial II
(3 credits)

ITALIAN L200
Introduction to Italian Studies
(3 credits)

ITALIAN L201
Italian Studies
(3 credits)

ITALIAN L202
Elementary Italian Conversation
(3 credits)

ITALIAN L203
Italian Conversation
(3 credits)

ITALIAN L210
Basic Intermediate Italian
(3 credits)

ITALIAN L211
Intermediate Italian
(3 credits)

ITALIAN L220
Introduction to Translation
(3 credits)

ITALIAN L221
Principles of Translation
(3 credits)

ITALIAN L250
Advanced Composition
(3 credits)

ITALIAN L251
Stylistics
(3 credits)

ITALIAN L260
Advanced Translation
(3 credits)

ITALIAN L261
Problems in Translation
(3 credits)

ITALIAN L410
Tutorial
(6 credits)

LINGUISTICS L200
Introduction to Linguistics I
(3 credits)

RUSSIAN L200
Elementary Russian I
(3 credits)

RUSSIAN L201
Elementary Russian II
(3 credits)

RUSSIAN L208
Intermediate Russian I
(3 credits)

RUSSIAN L209
Intermediate Russian II
(3 credits)

SPANISH L200
Introduction to Spanish Studies I
(3 credits)

SPANISH L201
Introduction to Spanish Studies II
(3 credits)

SPANISH L202
Elementary Spanish I
(3 credits)

SPANISH L203
Elementary Spanish II
(3 credits)

SPANISH L206
Idiomatic Spanish and Introduction to Translation I
(3 credits)

SPANISH L207
Idiomatic Spanish and Introduction to Translation II
(3 credits)

SPANISH L208
Intermediate Spanish I
(3 credits)

SPANISH L209
Intermediate Spanish II
(3 credits)

SPANISH L270
Advanced Composition and Stylistics I
(3 credits)

SPANISH L271
Advanced Composition and Stylistics II
(3 credits)

SPANISH L276
Spanish Translation I
(3 credits)

SPANISH L277
Spanish Translation II
(3 credits)

SPANISH L280
The Spanish Language in America I
(3 credits)

SPANISH L281
The Spanish Language in America II
(3 credits)

SPANISH L480
Tutorial I
(3 credits)

SPANISH L481
Tutorial II
(3 credits)

Philosophy § 51.21

PHILOSOPHY L202
Introduction to Philosophy
(6 credits)

PHILOSOPHY L204
Introduction to Logic
(6 credits)

PHILOSOPHY L210
Philosophy of Man
(6 credits)
PHILOSOPHY L212
Ethics
(6 credits)
PHILOSOPHY L400
History of Ancient Philosophy
(6 credits)

Physics § 51.22
PHYSICS 201Z
General College Physics
(6 credits)

Political Science § 51.23
POLITICAL SCIENCE L200
An Introduction to Political Science
(6 credits)
POLITICAL SCIENCE L210
International Politics
(6 credits)
POLITICAL SCIENCE L220
Canadian Government and Politics
(6 credits)
POLITICAL SCIENCE L221
American Government and Politics
(3 credits)
POLITICAL SCIENCE L240
The Government and Politics of the Soviet Union
(6 credits)
POLITICAL SCIENCE L251
British Government and Politics
(3 credits)
POLITICAL SCIENCE L261
International Organizations
(3 credits)
POLITICAL SCIENCE L263
Regional Organizations
(3 credits)
POLITICAL SCIENCE L291
Ancient Greek Political Philosophy
(3 credits)
POLITICAL SCIENCE L293
Roman, Mediaeval and Renaissance Political Philosophy
(3 credits)

Psychology § 51.24
PSYCHOLOGY L200
Introductory Psychology
(6 credits)

Sociology § 51.25
SOCIOLOGY L201
Introduction to Sociology
(3 credits)
SOCIOLOGY L203
Social Organization
(3 credits)
SOCIOLOGY L205
Individual and Society
(3 credits)

Theological Studies § 51.26
THEOLOGY L200 and L202
Selected Topics in Theology
(3 credits each)
THEOLOGY L204
Prayer as Seen in the Bible
(3 credits)
THEOLOGY L205
Prayer as Seen by Contemporary Theologians
(3 credits)
THEOLOGY L206
Theology of Hope
(6 credits)
THEOLOGY L210
Contemporary Atheism
(6 credits)
THEOLOGY L211
Christian Ethics
(6 credits)
THEOLOGY L215
The Christian Mystical Tradition
(6 credits)
THEOLOGY L216
Christianity and Marxism
(6 credits)
THEOLOGY L217
Russian Religious Humanism
(6 credits)
THEOLOGY L218
Soviet Humanism and Religion
(6 credits)
THEOLOGY L221
Women in Christianity
(6 credits)
THEOLOGY L225
Marriage
(6 credits)
THEOLOGY L231
Twentieth Century Consciousness of God
(3 credits)
THEOLOGY L232
Nineteenth Century Criticism of Christianity
(3 credits)
THEOLOGY L237
The Problem of Evil
(6 credits)
THEOLOGY L240
Theology and the Arts I: The Mythic Image
(3 credits)
THEOLOGY L241
Theology and the Arts II: The Open Eye
(3 credits)
THEOLOGY L255
Ultimate Concern in North American Literature
(6 credits)
THEOLOGY L261
Theology and Politics
(6 credits)
THEOLOGY L264
Theological Dimensions of Psychology I
(3 credits)
THEOLOGY L265
Theological Dimensions of Psychology II
(3 credits)
THEOLOGY L270
Science and Religion
(6 credits)
THEOLOGY L277
Primitive Religions
(6 credits)
THEOLOGY L287
Contemporary North American Judaism
(6 credits)
THEOLOGY L293
Introduction to Orthodox Christianity
(6 credits)

14.5.3 CONCORDIA FACULTY OF COMMERCE AND ADMINISTRATION

ADMINISTRATION 101
Introduction to Administration
This course is designed to develop a basic understanding of the role of administration in our society (the efficient organization and employment of people in the technostructure). (3 credits)

ADMINISTRATION 102
Perspective on Business
This course is designed to review the historical development of business (in Canada in particular) and to examine the relationships between the firm (management) and the owners, the employees, the customers, the government and the community. Further, to study some of the problems facing Canadian business today; the dehumanizing aspect, pollution problems, large vs. small firms, foreign ownership, competition, etc. (3 credits)

14.5.4 CONCORDIA FACULTY OF ENGINEERING

COMPUTER SCIENCE 111 (N-211)
Introduction to Computers and Computing
An introduction to the essential features of computers and computing systems. Problem solving, algorithms, and flowcharts. Detailed specifications of Fortran with numerical and non-numerical applications. *Lectures:* 3 hours per week, 1 term. *Laboratory:* 1½ hours per week, 1 term. (3 credits)
NOTE: Students who have credit for Computer Science 011 or equivalent may not take this course for credit.

14.5.5 CONCORDIA FACULTY OF FINE ARTS

NOTE: For full course descriptions, refer to the section indicated.

VISUAL ARTS
Studio Art § 81.5.1;81.6.1
ART C200
Studio Art I
(6 credits)
DESIGN C200
Introduction to Design
(6 credits)
Art History § 81.8.2
ART HISTORY C232
Introduction to Architecture and Sculpture
(6 credits)
ART HISTORY C240
Introduction to Art History
(6 credits)
ART HISTORY C249
Canadian Sculpture and Architecture
(6 credits)
Cinema § 81.9.2
CINEMA C211
History of Film
(6 credits)
PERFORMING ARTS
Music § 81.11.2
MUSIC C221
Theory/Aural Training
(3 credits)
MUSIC C222
Theory/Aural Training
(3 credits)
MUSIC C230
Private Study B I
(6 credits)
MUSIC C231
Private Study A I
(3 credits)
Music History § 81.11.2
MUSIC HISTORY C200
Music History and Society
(6 credits)
Integrative Music Studies § 81.11.2
INTEGRATIVE MUSIC STUDIES C200
Theory/Composition/Analysis I
(6 credits)
Music Performance Studies § 81.11.2
MUSIC PERFORMANCE STUDIES C201
Choir/Orchestra
(3 credits)
Theatre § 81.10.3
THEATRE C201
Introduction to the Theatre
(3 credits)
THEATRE C300
Theatre History
(6 credits)
Scenography § 81.10.3
SCENOGRAPHY C201
Stagecraft I
(3 credits)

14.5.6 SIR GEORGE WILLIAMS FACULTY OF SCIENCE

NOTE: For full course descriptions, refer to the section indicated.

Biology § 91.6
BIOLOGY N-201
General Biology I
(3 credits)
BIOLOGY N-202
General Biology II
(3 credits)
Chemistry § 91.7
CHEMISTRY N-201
General Chemistry I
(3 credits)
CHEMISTRY N-202
General Chemistry II
(3 credits)
Geology § 91.11
GEOLOGY N-215
Introductory Geology
(3 credits)
GEOLOGY N-231
Mineralogy I
(3 credits)
Mathematics § 91.12
MATHEMATICS N-200
Fundamental Concepts of Algebra
(3 credits)
MATHEMATICS N-201
Elementary Functions
(3 credits)
MATHEMATICS N-202
College Algebra
(3 credits)

MATHEMATICS N-203
Differential and Integral Calculus I
(3 credits)
MATHEMATICS N-204
Vector Analysis and Analytical Geometry
(3 credits)
MATHEMATICS N-205
Differential and Integral Calculus II
(3 credits)
MATHEMATICS N-206
Linear Algebra for the Social Sciences
(3 credits)
MATHEMATICS N-207
Statistics for the Social Sciences
(3 credits)
MATHEMATICS N-208
Fundamental Mathematics I
(3 credits)
MATHEMATICS N-209
Fundamental Mathematics II
(3 credits)

Physics § 91.13

PHYSICS N-204
Mechanics
(3 credits)
NOTE: See Physics N-224 for Laboratory associated with this course.
NOTE: students with credits for CEGEP Physics 101 or equivalent may not take this course for credits.

PHYSICS N-205
Electricity and Magnetism
(3 credits)
NOTE: See Physics N-225 for Laboratory associated with this course.
NOTE: Students with credits for CEGEP Physics 102 or equivalent may not take this course for credits.

PHYSICS N-206
Waves and Modern Physics
(3 credits)
NOTE: See Physics N-226 for laboratory associated with this course.
NOTE: Students with credits for CEGEP Physics 103 or equivalent may not take this course for credits.

PHYSICS N-210
Discoveries in Physics
(6 credits)

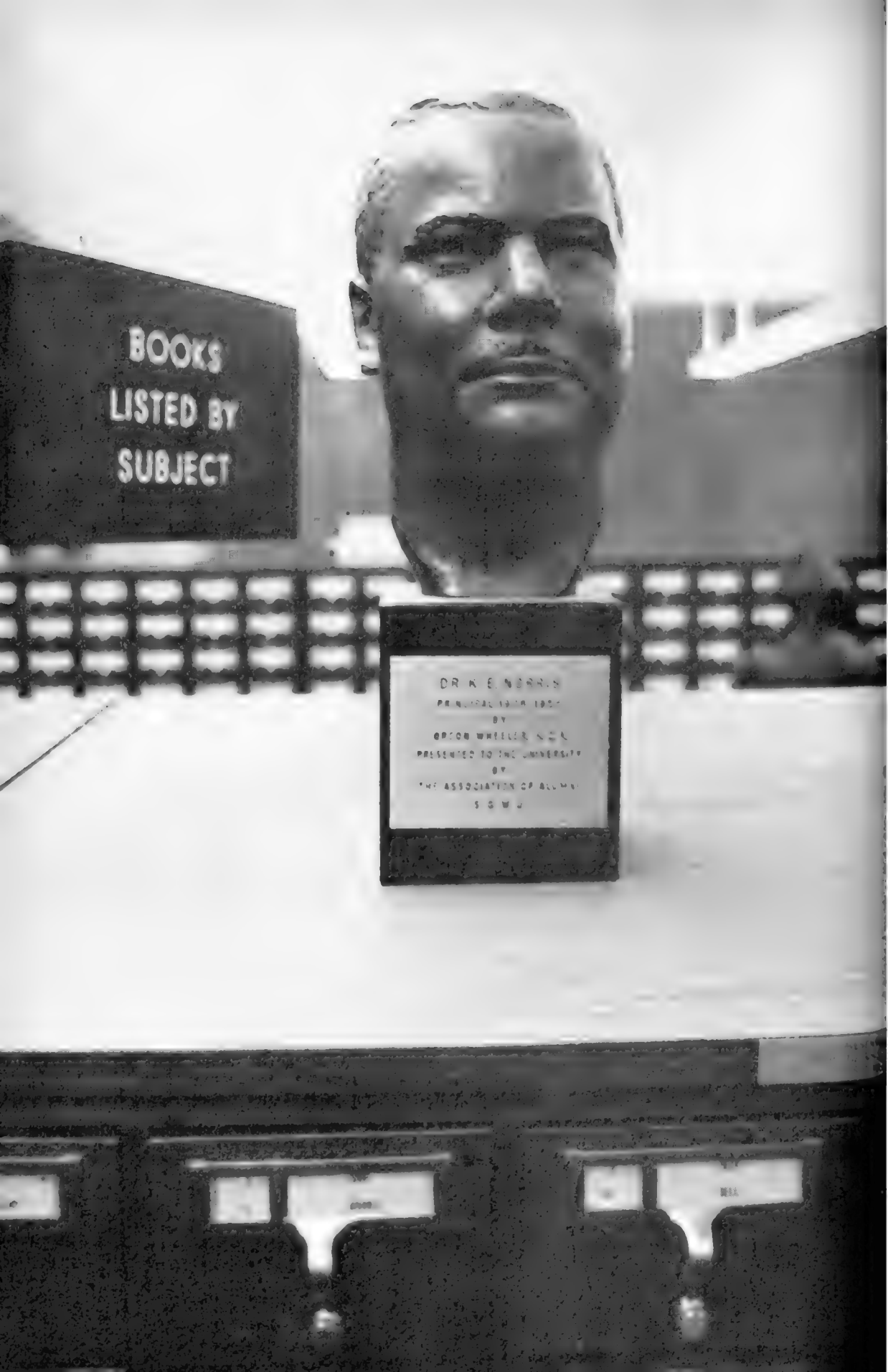
PHYSICS N-224
Introductory Experimental Mechanics
(1 credit)
NOTE: Students with credits for CEGEP Physics 101 or equivalent may not take this course for credit.

PHYSICS N-225
Introductory Experimental Electricity
(1 credit)
NOTE: Students with credits for CEGEP Physics 102 or equivalent may not take this course for credit.

PHYSICS N-226
Introductory Experimental Waves and Modern Physics
(1 credit)
NOTE: Students with credits for CEGEP Physics 103 or equivalent may not take this course for credit.

14.6 Independent Course Students

Where places are available, after regularly admitted students have been registered, individuals may register on an individual course basis as independent students in courses for which they have the qualifications. Registration dates will be published in the daily press in the month of August.


BOOKS
LISTED BY
SUBJECT

15 Tuition and Fees

15.1 Tuition and Fees

The University reserves the right to change the published scale of fees without notice.

Tuition—	
Engineering courses—	$45.00 per course
All other courses—	$15.00 per credit
Other Fees—	
Associate Diploma Fee	$5.00
Copy of Registration Certificate	1.00
Duplicate of receipt	2.00
Graduation Fee	10.00
Late Registration Fee	10.00
Re-reading of paper	10.00
Removal of "Incomplete"	10.00
Special Examination Fee	15.00
Supplemental Examination	
Written at Concordia	10.00
Written elsewhere— plus invigilation fee when applicable	15.00
Transcript of academic record	1.00

In addition to the fees set out above, students are required to pay certain Student Service Fees, Student Association Fees and other miscellaneous charges. The current rate of these fees and charges can be obtained from the Student Accounts Offices.

15.2 Payment of Tuition and Fees

Fall Registration—

Payment of tuition and other fees may be made in accordance with one of the following options:

a) payment in full at registration.

b) payment in two instalments—

1. at registration—one half tuition plus all other fees plus $5.00 deferred payment fee.
2. on November 1—balance.

c) payment in four instalments—

1. at registration—one quarter of tuition plus all other fees plus $10.00 deferred payment fee.
2. on November 1—one quarter of tuition.
3. on December 1—one quarter of tuition.
4. on January 1—balance.

Summer and Winter Registration—

Payment of tuition and other fees may be made in full at registration or in two instalments similar to those set out in b) above.

An additional charge of $5.00 will be made if instalment payments are not made on their due dates.

A charge of $5.00 will be made for cheques returned for any reason.

Failure to make payment, or to arrange satisfactory settlement, of amounts owing to the University when they become due is sufficient cause to bar the student from classes or examinations, and to withhold diploma, scholastic certificate or transcript of record until the debt is adjusted with the University.

Registration is not considered complete until satisfactory arrangements have been made for the payment of fees.

All contracts are subject to revision for the adjustment of errors or omissions.

15.3 Course Cancellations, Withdrawals and Adjustment

Students who withdraw from courses or from the University must comply with the requirements set out in the Timetable of Classes published before each academic session in order to qualify for a rebate of tuition according to the following scale:

1. Students who withdraw from the University before the end of the fall course change period - full rebate of tuition less 6%.
2. All others -

	Rebate of Tuition for courses of		
	1st Term	2 Terms	2nd Term
Prior to the end of the fall course change period	Full rebate	Full rebate	Full rebate
End of fall course change period to September 30	3/4	7/8	Full rebate
October 1 to November 1	1/2	3/4	Full rebate
November 2 to November 30		5/8	Full rebate
December 1 to end of January course change period		1/2	Full rebate
End of January course change period to January 31		3/8	3/4
February 1 to February 28		1/4	1/2

The above rebates apply to the net reduction of courses within each category. Different course categories are not combined for purposes of tuition rebate calculations.

Student Services fees are subject to the same schedule of rebates as tuition. All other fees are not refundable.

16 Academic Regulations

Table of Contents

16.1 GENERAL INFORMATION
- 16.1.1 Academic Year
- 16.1.2 Definition of Credit
- 16.1.3 Status
- 16.1.4 Course Load
- 16.1.5 Residence Requirements
- 16.1.6 Graduation

16.2 PROGRAMMES AND REGULATIONS
- 16.2.1 Curriculum Obligations
- 16.2.2 Curriculum Regulations
- 16.2.3 Concentration Requirements
- 16.2.4 Honours Programmes—New Concordia Regulations
- 16.2.5 Old Honours Regulations
- 16.2.6 Specialization Programmes
- 16.2.7 Major Programmes
- 16.2.8 Minor Programmes
- 16.2.9 Double Majors
- 16.2.10 Double Minor Programmes
- 16.2.11 Major-Minor Combinations
- 16.2.12 Certificate Programmes

16.3 EVALUATION, GRADING, EXAMINATIONS AND ADVANCEMENT
- 16.3.1 Evaluation
- 16.3.2 Grading System
- 16.3.3 Grading—Procedures and Special Cases
- 16.3.4 High Academic Achievement
- 16.3.5 Failure Regulations

16.4 CAMPUS-IDENTIFIED REGULATIONS
- 16.4.1 Loyola Campus
- 16.4.2 Sir George Williams Campus

16.1 General Information

These regulations are in effect as of June 1, 1977 and apply to all students. In some instances, former regulations will still apply. These exceptions will be noted where appropriate.

It is the responsibility of the student to know the academic regulations.

16.1.1 ACADEMIC YEAR

Fall/Winter Session:

The day and evening winter session of the University is divided into two terms of fifteen weeks, each including the examination period. Dates marking the opening and closing of these terms are found in the Academic Calendar § 11.

Summer Session:

A nine-week session is operated during the summer in the Evening Division primarily for Evening Division students.

Summer Sessions and Special Day summer Sessions are considered part of the following Fall/Winter Session for record purposes.

16.1.2 DEFINITION OF CREDIT

In accordance with the recommendations of the Quebec Council of Universities, effective 1974-75, the credit base takes into account the total activity of the student, in terms of lectures, conferences, laboratories, studio or practice periods, examinations, and personal work. One credit represents, for the average student, a minimum of 45 hours spread across the various activities listed above. This system does not apply to the Engineering programme where the definition of degree components is still listed in terms of years and courses.

16.1.3 STATUS

Full-time students are those registered for the equivalent of 24 credits or more a year, or the equivalent of 12 credits or more each term.

Part-time students are those registered for the equivalent of less than 24 credits a year, or the equivalent of less than 12 credits each term.

An *Independent student* is one who is not proceeding to a degree, diploma or certificate.

16.1.4 COURSE LOAD

Fall/Winter Session—Full-Time Status

The course load varies according to the faculty in which the student is enrolled.

1) *Sir George Williams Faculty of Arts and Faculty of Fine Arts*

First year students in the Faculty of Arts will take a maximum of thirty credits. A student may take thirty-six credits during one or both of his final two fall/winter sessions providing:

a) There are no failures in the previous academic year (minimum thirty-credit programme) and
b) The average grade of the previous academic year (minimum thirty-credit programme) is 'B' or 75%.

2) *Sir George Williams Faculty of Science and the Department of Computer Science*

Students enrolled in the Bachelor of Science or the Bachelor of Computer Science will normally register for a maximum of thirty credits each fall/winter session.

3) *Commerce and Administration*

A student may register for a maximum of thirty credits in any fall/winter session.

4) *Engineering*

See under Engineering Faculty § 71

5) *Loyola Faculty of Arts and Science*

Full-time students in the degree programme will normally require three (3) calendar years to obtain a Bachelor's degree. The normal course load for each year is thirty (30) credits. A student may accelerate his/her programme by taking an increased work load. This requires the permission of the Department Chairman and of the Dean and is limited to six credits more than the year's load prescribed in the departmental programmes. Courses taken during the regular session at another university or campus must be counted as part of the year's work load. Courses taken in the Summer School are not included. Permission for accelerated programmes is reserved for students who have maintained a 'B' or 75% average or more in the previous year on a full work load.

Fall/Winter Session—Part-Time Status

Students in this division may register for a maximum of three six-credit courses or their equivalent equally divided between the terms.

Summer Session

Students may not take more than a total of twelve credits of work during a summer session. The course load for Special Day Summer Sessions may be further restricted by departmental regulations.

16.1.5 RESIDENCE REQUIREMENTS

1. In addition to the specified courses, there is a residence requirement of 45 credits

for any degree, defined as follows: A student in Arts, Fine Arts, Science, Commerce and Computer Science must complete the last forty-five credits of the courses of the degree requirements at Concordia University. Engineering students must complete the final fifteen half-semester courses of the required departmental degree programmes in residence at Concordia University.

2. Any student who already possesses one degree must satisfy the following regulations in order to earn a second degree at the Bachelor's level at Concordia University:
   a) Register in an established programme with a higher degree of concentration than a Minor.
   b) Complete sixty credits in courses other than those credited towards the first degree, at least thirty-six of which must be taken in the new field of specialization.
3. Any student seeking to transfer to Concordia University after having failed at another university or after having compiled an unsatisfactory record at another university must fulfill the residence requirements stipulated for him upon admission. In general, a minimum of sixty credits will be required for any degree.

16.1.6 GRADUATION

Degree candidates who expect to complete the requirements for a degree in a particular year must contact the Registrar's Office to make application for that degree. Forms provided by the Registrar's Office must be submitted before October 1, 1977.

16.2 Programmes and Regulations

16.2.1 CURRICULUM OBLIGATIONS

Where a student acquires credit toward a degree, diploma or certificate in a discontinuous manner and over a protracted period of time subsequent to his admission, the University reserves the right, at any time, to require such student to take further credits in order to obtain that degree, diploma or certificate.

16.2.2 CURRICULUM REGULATIONS

The regulations related to the degree requirements are located in the Faculty sections:

Faculty of Commerce and Administration — § 61
Faculty of Engineering — § 71
Faculty of Fine Arts — § 81
Sir George Williams Faculty of Arts — § 41
Loyola Faculty of Arts and Science — § 51
Sir George Williams Faculty of Science — § 91

16.2.3 CONCENTRATION REQUIREMENT

Since the CEGEP programme is designed to give all students the opportunity to explore different fields and thus acquire a broad general basis for future study, the undergraduate programme requires some degree of concentration, according to the interests and capacities of the student. There are several forms of concentration, ranging through Honours, which requires success in a programme of high concentration accompanied by a prescribed level of performance; the Specialization and the Major requiring varying degrees of concentration without a prescribed performance requirement; and the Double Minor, involving a lesser degree of concentration in two disciplines or fields, and without a prescribed performance requirement.

In order to graduate, therefore, a student must have completed one of the following types of programme: a Double Minor; an Interdisciplinary Major; a Departmental Major; a Specialization programme; a combined Honours programme; an Interdisciplinary Honours programme; a Departmental Honours programme.

Prior to registration, students will be required to select one of the types of programme outlined above. In the case of Honours, students will register upon entry in an Honours *programme*, but their acceptance as Honours *students* will depend on their performance during their first year. Students failing to meet requirements for Honours standing will proceed in either a Specialization or a Major programme.

16.2.4 HONOURS PROGRAMMES (NEW CONCORDIA REGULATIONS)

These regulations represent a minimum academic standard for Honours Programmes. All Programmes and additional Faculty regulations, including those with higher standards, are listed in the Faculty sections under "Honours Programmes".

The University has approved programmes leading to an Honours degree in certain selected fields. The Honours programme consists of 60 or more credits in a discipline or field, with superior performance being required to enter and remain in the programme. In order to qualify for an Honours degree a student must comply with the regulations set forth below:

1. An Honours student must meet the general degree requirements as well as the specific requirements for an Honours degree.
2. An Honours student must maintain an average of 'B' or 75% in all Honours courses; the minimum acceptable grade in any single Honours course is C or 65%.
3. An Honours student must have a minimum average of 'B'- or 71% over Honours courses taken in each academic year. For part-time students this will be calculated in eighteen credit blocks.
4. In the non-Honours courses of the degree programme, an Honours student must

have an average of no less than 'C' or 65%.

5. Students who are required to withdraw from the Honours programme will proceed in the Major or Specialization programme. Reinstatement in the Honours programme is possible only by appeal to The Faculty Honours Committee.

These new regulations will apply to those students entering Honour Programmes as of June 1, 1977. Students already in an Honours programme may continue under the old regulations established prior to June 1, 1977, set forth below:

16.2.5 OLD HONOURS REGULATIONS

1. Sir George Williams Faculty of Arts; Sir George Williams Faculty of Science; Faculty of Commerce and Administration; and the Faculty of Fine Arts

The University has approved programmes leading to an Honours degree in certain selected fields. These Honours programmes consist of 60 or more credits in a discipline or field, with superior performance being required to enter and remain in the programme. It is recognized that a small number of courses may be designated as being open only to Honours students (eg., Honours Essay, Honours Seminar, etc.). In order to qualify for an Honours degree a student must meet all of the academic qualifications and comply with the regulations set forth below:

1. A candidate for an Honours degree should indicate such intention at registration and consult the Honours representative of the department(s) concerned as soon as possible. Acceptance as an Honours student will depend on performance during the first year. The Honours standing will be reviewed annually.
   A student who has followed the courses prescribed for the Honours programme and has met all the requirements may enter the programme with the approval of the Honours representative any time before the beginning of the final 30 credits. No retroactive approval may be made.
2. A student who enters with advanced standing may apply pro tanto credits which are applicable to the Honours degree requirements, upon approval by the department(s).
   A transfer student must complete a minimum of 30 credits in the basic Honours programme in residence to receive a degree with Honours.
3. An Honours student must maintain a 'B' or 75% average with no grade lower than a 'C' or 65% in all courses in the basic Honours programme.
   An Honours student must meet the general degree requirements as well as the specific requirements for an Honours degree, and must obtain at least a 'C' or 65% average over the total degree programme.
   Failure in any course will mean suspension or withdrawl from the Honours programme. Students who fail to meet acceptance requirements and who are required to withdraw from the Honours programme will proceed in the Major or Specialization programme. Reinstatement into the Honours programme is possible only by recommendation by the Honours representative.
4. A student shall be allowed to qualify for only one Honours degree in either a single or combined Honours programme.
5. A degree with Honours in any programme is granted upon graduation only with the approval of the Senate.

2. Loyola Faculty of Arts and Science

Honours: A programme which consists of a *minimum* of 60 credits in a discipline or field, with superior performance in the programme. It is recognized that "field" may be interpreted as two separate disciplines having a rational relationship (e.g., Philosophy and Religion) or an interdisciplinary field (e.g., Urban Studies). In most cases students who wish to pursue graduate studies will require an Honours programme. The requirements for Honours programmes vary by Departments, and Departments must be consulted concerning specific regulations.

16.2.6 SPECIALIZATION PROGRAMMES

The Specialization, in keeping with the structures recommended by the Quebec Council of Universities, is an approved sequence of courses including 60 or more credits without a prescribed performance requirement.

16.2.7 MAJOR PROGRAMMES

The Major, again in keeping with the structures recommended by the Quebec Council of Universities, is an approved sequence of courses including 36 or more credits. As in the case of the Specialization, the Major may include certain approved courses in other closely related fields.

16.2.8 MINOR PROGRAMMES

A programme, again in keeping with the structures recommended by the Quebec Council of Universities, is an approved sequence of 24 or more credits in a specific discipline.

16.2.9 DOUBLE MAJORS

Double Major programmes are made up of two approved sequences of 36 or more credits in two specific disciplines or fields. (Only available in the Loyola Faculty of Arts and Science)

16.2.10 DOUBLE MINOR PROGRAMMES

Double Minor programmes are made up of two approved sequences of 24 or more credits in two specific disciplines or fields. A student may combine any two Minors to form a Double Minor. (Only available in the Sir George Williams Faculty of Arts, Sir George Williams Faculty of Science, Faculty of Commerce and Administration, Faculty of Fine Arts)

16.2.11 MAJOR-MINOR COMBINATIONS

A Major programme may be combined with a Minor programme.

16.2.12 CERTIFICATE PROGRAMMES

An Undergraduate Certificate programme is a coherent programme of 30 credits made up of regular undergraduate courses, which are, in turn, applicable to the appropriate Bachelors Degree.

16.3 Evaluation, Grading, Examinations and Advancement

16.3.1 EVALUATION

A university degree certifies that its holder has attained a measurable level of achievement, as established by a recognized system of evaluation. It is consequently required that the performance of each student in each course be evaluated by the instructor (or instructors) responsible for the course.

The final grade which assesses the performance of each student in each course will take into account the total measurable performance of the student in that course. Specifically, the grade will be given on the basis of one or more of the following:

i) Assigned work, term papers, projects, etc.
ii) Class participation, which in the case of certain disciplines may justify an attendance requirement.
iii) Progress tests.
iv) Laboratory tests and/or laboratory work.
v) Mid-term and/or final examinations.

Where appropriate, a level of written expression may be given consideration in determining the final grade.

The weighting of the various evaluative elements is the responsibility of the instructor. At the beginning of the course the instructor will inform the class of the evaluative scheme to be used.

While the language of instruction in Concordia University is normally English, students have the right to write their assignments and examinations in French. It must be understood, however, that in a case where an instructor cannot read French, the assignments or examinations will have to be read by another person, with possible resulting disadvantages and delays for the student. Students are advised to enquire of the instructor at the beginning of their course whether he or she will personally read assignments and/or examinations written in French. Notwithstanding the above, language and literature departments may require assignments and examinations to be written in the language being studied.

The instructor has the option of submitting grades on either a percentage scale or a letter grade scale, subject to the decision of each Faculty Council.

If a Faculty member assigns a percentage it will be converted to a letter grade in accordance with Table A. Both grades will appear on record and transcript.

If a letter grade is assigned it will be converted to a numerical mark shown in Table B. Both grades will appear on record and transcript.

The numerical grades will be used for evaluation of academic achievement levels.

16.3.2 GRADING SYSTEM

Assigned or Converted letter or numerical mark

TABLE A		TABLE B	
From	To	From	To
90-100	A+	A+	95
85- 89	A	A	87
80- 84	A−	A−	82
77- 79	B+	B+	78
73- 76	B	B	75
70- 72	B−	B−	71
67- 69	C+	C+	68
63- 66	C	C	65
60- 62	C−	C−	61
57- 59	D+	D+	58
53- 56	D	D	55
50- 52	D−	D−	51
40	F	F	40
20	FF	FF	20

F—Failing Grade *

The grade submitted will either be 'F' or 40.

For courses in which supplemental examinations are not precluded, a student to whom an 'F' grade has been assigned and who is in good academic standing, may, subject to the regulations of the Faculty, write a supplemental examination.

For courses in which supplemental examinations *are* precluded, this grade will be recorded as FNS to draw attention to the absence of supplemental privilege for the *course* in question.

FF—Failing Grade *

The grade submitted will either be 'FF' or 20.

For courses in which supplemental examinations are not precluded, a student to whom an 'FF' grade has been assigned, and who is in good academic standing, may, subject to the regulations of the Faculty, write a supplemental examination.

For courses in which supplemental examinations *are* precluded, this grade will be recorded as FFNS to draw attention to the absence of supplemental privilege for the *course* in question.

* The matter of supplemental examination privilege will be considered by Senate during the 1976/77 academic year. Pending legislation, if any, may require a restatement of the F and FF grade.

16.3.3 GRADING—PROCEDURES AND SPECIAL CASES

In each course the instructor is expected to make an evaluation and submit a grade for every student registered.

If the student has not completed all necessary work, or has not written the required examinations, the instructor submits a grade based on the weighted sum of grades on completed work and zero for incompleted work. (See examples i, ii and iii below). It should be noted that an instructor may stipulate that in order to achieve a passing grade in a course, a student must have demonstrated a specified level of competence in particular components required for evaluation in that course. (See examples (iv)a, (iv)b and (iv)c below).

(In the event that a student appears to have withdrawn, unofficially, from a course, and *no* material is available for evaluation, the instructor will clearly *not* be able to submit a grade. The Registrar will indicate this situation with the notation NR (Not Reported). This notation carries no numerical weighting but denotes a failure for purposes of counting the number of failed courses in assessing academic standing.

INC and DNW

If the work for a course has not been completed, the following notations will be made after the grade given for that course:

INC (Incomplete) denotes that, though the final examination, if any, was written, work essential for evaluation of a student's performance, such as a term paper or a laboratory, was not completed.

DNW (Did Not Write) denotes that, though the instructor marked the term work, the final examination was not written.

In some circumstances both INC and DNW may be used simultaneously.

Examples

The following examples demontrate application of the system. They are all based on the assumption that the final mark is composed of 20% assignments; 40% term paper; 40% examination, *for illustrative purposes only.*

		Assignments	*Term Paper*	*Examinations*	*Total*
(i)	Weighting	20%	40%	40%	100%
	Specific mark out of 100	90	not written	80	
	Contribution to final grade	18	—	32	50

The final grade is 50 or 'D−', and INC is noted if the *instructor* is prepared to accept a late term paper.

		Assignment	*Term Paper*	*Examinations*	*Total*
(ii)	Weighting	20%	40%	40%	100%
	Specific mark out of 100	85	85	not written	
	Contribution to final grade	17	34	—	51

The final grade is 51 or 'D−', and DNW is noted.

		Assignments	*Term Paper*	*Examinations*	*Total*
(iii)	Weighting	20%	40%	40%	100%
	Specific mark out of 100	90	not written	not written	
	Contribution to final grade	18	—	—	18

The final grade is 'FF' (weighted 20), and DNW is noted as well as INC if the *instructor* is prepared to accept a late term paper.

(iv) *a.* The instructor has stipulated that at least 45% be achieved on the final examination in order that a passing grade be obtained in the course:

	Assignments	*Term Paper*	*Examinations*	*Total*
Weighting	20%	40%	40%	100%
Specific mark out of 100	90	70	35	
Contribution to final grade	18	28	14	60

While the weighted sum is 60, the stipulated 40% was not achieved on the final examination, and so *the final grade is submitted as 'F', and weighted at 40.*

b. The instructor has stipulated that at least 45% be achieved on the final examination in order that a passing grade be obtained in the course:

	Assignments	*Term Paper*	*Examinations*	*Total*
Weighting	20%	40%	40%	100%
Specific mark out of 100	90	85	not written	
Contribution to final grade	18	34	—	52

While the weighted sum is 52, the final examination was not written, and hence the stipulated 45% was not achieved, and so *the final grade is submitted as 'F', and weighted at 40, with the notation DNW added.*

c. The instructor has stipulated that at least 45% be achieved on the term paper in order that a passing grade be obtained in the course:

	Assignments	*Term Paper*	*Examination*	*Total*
Weighting	20%	40%	40%	100%
Specific mark out of 100	90	not written	85	
Contribution to final grade	18	—	34	52

While the weighted sum is 52, the term paper stipulation has not been met, and so *the final grade is submitted as 'F' and weighted at 40, with the notation INC added.*

Replacement of 'F', DNW and INC Entries

The method of recording changes from 'F' DNW and INC entries will be as follows:

I) In cases where a supplemental examination or a late completion has been allowed on medical or compassionate grounds, the new grade will replace the original entry.

II) In all other instances the original entry will be retained on the transcript. A second entry of the course code will be made along with the final grade. An (X) beside this final grade will indicate the late completion or supplemental. (X) will be explained at the foot of the transcript.

III) A student failing a supplemental examination will receive the grade 'FF' or 20.

Deadlines for Late Completions and Supplementals

The limiting dates for the submission of late work are:

a) For Fall Session courses not later than April 1st.

b) For all other courses in the Fall/Winter Session not later than August 1st.

c) For all courses in the Summer Session not later than November 1st.

The limiting date for the writing of supplemental examinations is the official supplemental examination period following each session. This period is approximately three months after writing the original examination.

The student may have grounds to request a deferment of the deadline. In this case the Dean's Office will inform the Records Office of the extended deadline.

Special Note Re INC

Students are advised that work completed for an INC grade and reported to the Registrar's Office before the submission of the list of failed students to the Deans will *not* count as a failure when assessing academic standing. The date for the submission of this list will appear in the University Calendar.

NOTE: The University is not responsible for providing facilities to enable students to clear INC grades by this date.

16.3.4 HIGH ACADEMIC ACHIEVEMENT

The following regulations will be in force for the current academic year.

Loyola Campus

Honourable Mention:

Degrees may be awarded with one of the following designations, provided that a minimum of 60 credits have been taken at this institution:

Summa Cum Laude - For an overall average of 90% or more in the courses taken at this University.

Magna Cum Laude - For an overall average of 80% to 90% in the courses taken at this University.

Courses for which the student received "Credit" or which were graded on a Pass-Fail basis will not enter into the calculation of this average.

Sir George Williams Campus

A degree with distinction may be achieved by students registered in any programme in the new three-year structure by achieving a grade point average of 3.20 during their last two years (approximation) of study or a grade point average of 3.10 over the complete three years. Failure on record (F, R, INC, ABS) during the period of evaluation disqualifies the student from Graduation with Distinction. Specific details of these regulations as well as the regulations for the old four-year programme may be obtained from the Records Office. The achievement of Distinction is recorded on the degree certificate.

Concordia University

Effective January 1, 1978 the following regulations will be in force:

Distinction

A degree With Distinction or With Great Distinction may be achieved by obtaining the following levels:

With Distinction 'A'- or 'A' or 80-90%
With Great Distinction 'A+' or 90-100%

The average will be calculated over the student's last 90 credits, or, in the case of transfer students, all courses taken at Concordia. However, a transfer student must have taken a minimum of sixty credits at Concordia in order to be eligible for distinguished mention.

16.3.5 FAILURE REGULATIONS*

These failure regulations are to be considered as defining the minimum standard acceptable to the University. Subject to the approval of Senate, higher standards may be established by any Faculty. For purposes of these regulations, "failure" includes the grades F, FF, FNS, FFNS and NR.

i) *90 Credit Programme*

a. Any student who fails courses equivalent to more than twelve credits before obtaining thirty credits on record, or who fails courses equivalent to more than twenty-four credits before obtaining sixty credits on record is a failed student.

Such a student will have entered on record:

"Failed. Must obtain permission to re-register from the Faculty Dean."

b. Any student who fails courses equivalent to more than thirty credits is a failed student. Such a failed student may not apply for readmission.

Such a student will have entered on record:

"Failed. May not re-register."

ii) *Extended Credit Programmes (MSP, MEP, ECP)*

a. Any student who fails courses equivalent to more than twelve credits before obtaining thirty credits on record, or who fails courses equivalent to more than twenty-four credits before obtaining sixty credits on record, or who fails courses equivalent to more than thirty-six credits before obtaining ninety credits on record is a failed student.

Such a student will have entered on record:

"Failed. Must obtain permission to re-register from the Faculty Dean."

b. Any student who fails courses equivalent to more than forty-two credits is a failed student. Such a failed student may not apply for re-admission.

Such a student will have entered on record:

"Failed. May not re-register."

iii) *Regulations for Failed Students*

a. Failed students are neither eligible to write supplemental examinations nor entitled to late completion of courses.

b. Failed students who are given permission to re-register are placed on Academic Probation.

c. Students placed on Academic Probation must pass the next thirty credits on the first attempt and satisfy any other condi-

tions specified for their re-admission. Students failing to meet these requirements may not re-register.

These Failure Regulations are liable to modification in the case of students transferring either between faculties or from another university.

* Students in the Faculty of Engineering will be subject to the failure regulation published in Section 71.2 of the Faculty of Engineering Regulations.

16.4 Campus—Identified Regulations

New Concordia Academic Regulations related to the following items are under study and may be enacted by the Senate prior to the 1977/78 academic year. In the interim the appropriate governing regulations are listed below classified by degrees.

It is stressed that in addition to these regulations, students are bound by the Concordia Regulations in Section 16.1 (General Information), Section 16.2 (Programmes and Regulations), Section 16.3 (Evaluation, Grading, Examinations, and Advancement).

16.4.1 LOYOLA CAMPUS (Students registered in BA; BSc; B Comm)

External Credit

A student who is registered as a full-time student at this University may obtain credit towards his/her degree for courses taken at another university, provided he/she has received *prior* approval of the course of study from his/her Chairman and Dean. It is the responsibility of the student to ensure that the course of study will satisfy the requirements of his/her programme. Only in exceptional circumstances may a student complete his/her final year at another university.

Para-Academic Activity

A student may undertake a research project in conjunction with a para-academic activity for academic credit if the project is accepted by the Para-Academic Credit Board.

Para-Academic Activity is any ongoing activity which is not sponsored by departments or disciplines *per se;* but which allows within its range the possibility of research and reflection on the activity, and whose merit can be measured by a sponsor.

A Para-Academic Project is an undertaking by a single student which can be evaluated by a sponsor. Each project may last no more than one (1) academic year, and shall be the equivalent of three credits. The number of credits given for Para-Academic Activity shall be no more than six (6) spread over three (3) university years. A project may take the place of an elective, but not of a required course.

The Sponsor of a project must be a full or part-time member of the faculty, and may be a sponsor normally for not more than three (3) people.

The student selects the project and possible sponsor(s), and with the approval of the sponsor(s) submits a coherent outline of the proposed project to the Para-Academic Credit Board.

To be accepted, the project must meet the criteria of activity, reflection and presentation. With sufficient activity, resources and innovative ideas, the student must demonstrate that he/she has the means of completing the project, and that it will benefit him/her as a person within the context of his/her experience.

A student doing a Para-Academic Activity Project presents the final report to the sponsor, who grades the project and transmits the grade to the Para-Academic Credit Board. The Board transmits the grade for credit, together with a brief description of the project, to the Registrar.

Independent Studies

It is the intention of this programme to provide encouragement to those students who show extraordinary commitment to independent studies and/or research as well as to remedy a lack of efficient channels for processing, evaluating and accrediting worthy independent research projects — whether they be carried out in academic, governmental or business institutions. It is hoped that I.S.P. projects will take into account not only the student's prior formal education but prior life experience, work and independent studies as well as his/her future objectives; and to do this in a way that is not possible within the proper limits of established disciplinary boundaries. It is envisioned that credits obtained through the I.S.P. will be integral of the student's regular academic programme.

For detailed information concerning this programme (i.e., rules for project eligibility) please apply to the Director of the programme.

Supplemental Examinations

In certain cases where a student has failed the final examination, he/she may be given a second opportunity to write a final examination paper.

Supplemental Privileges are restricted to Science courses which are prerequisite.

To be eligible any student must have a failing grade of not less than 35% and must have the approval of the department in which the course is offered as well as the approval of the Chairman of the department in which he/she is registered. Not more than two Supplementals will be granted in any one academic year (not including Summer School). It is the responsibility of the student to make written application to the Assistant Registrar by the deadline specified in the Academic Calendar.

Special Examinations

If a student is unable to write a final examination or to complete the required

work in a course because of accident, short illness, death in the family or for some other valid reason, he/she may apply to write a Special Examination. The application, accompanied by the pertinent documentation, should be made in writing to the Registrar. The application must be made within the prescribed time limit. In certain cases, a department may recommend an alternative course of action.

Aegrotat Standing

If a student is unable to write a final examination or complete the required work in a course because of prolonged and serious illness, he/she may apply for Aegrotat Standing in that course. The application, accompanied by the pertinent documentation, should be made in writing to the Registrar. The department may recommend a grade or the award of a credit.

Cheating and Plagiarism

Essays and research papers should demonstrate the student's ability to think originally and to use sources intelligently. Plagiarism represents a failure to think critically or creatively, and will usually result in at least a failing grade for the assignment.

In general, plagiarism is an attempt to "pass off" the words or ideas of another author as one's own. It includes *verbatim* copying or translating and/or paraphrasing directly or through translation without acknowledging the source by footnotes or quotation marks. This applies to a phrase, a sentence, a paragraph, an idea, or a pattern of ideas.

If the writer is conscientious, uses common sense, and has sufficient respect for his/her work as well as the work of others, plagiarism should not be a problem.

The penalties for cheating or deliberate plagiarism are severe. The minimum penalty is a grade of zero for the work involved. The student who requires more specific guidelines than are presented here, is advised to consult with the professor to whom he or she is submitting written work.

Students are warned that the purchase of term papers from advertized agencies will be regarded as an extremely serious instance of plagiarism and will be penalized accordingly.

Appeals

Every student has the right to appeal against the grade assigned to him/her in a particular course or a Para-Academic Activity project. He/she should contact the Student Ombudsman for information and assistance.

The procedures for Student Appeals (Academic) adopted by Senate are as follows:

The student's first step for any appeal is to consult with the professor. It is every student's right to meet with his/her professor and discuss his/her work, exams, etc., and have them re-evaluated by the professor.

Should the first step prove unsatisfactory to the student, his/her second choice is to appeal in writing to the Departmental Chairman. The student may or may not have already consulted the Student Ombudsman at this point.

The student must submit his/her appeal in writing to the Registrar within two (2) weeks of the mailing of marks from the Records Office.

The Chairman, upon notification by the Registrar shall:

(i) set up a Departmental Committee to review the student's term work, exams, projects, etc. It shall consist of two (2) faculty members from the same discipline (other than the professor concerned), and either one (1) student chosen by the Chairman or a third faculty member chosen by the chairman should the student so desire:
(ii) request from the student the written grounds for appeal, and also from the professor a written response to the appeal.

The Departmental Committee will meet within seven (7) days after the Chairman has constituted it, and make its report within fourteen (14) days.

The Committee will invite the two (2) parties involved in the appeal (together if either party so requests), and all others who wish to testify, to appear before it for a personal interview. It shall arrive at a conclusion by meeting as often as necessary and reviewing any information offered on behalf of the professor or the student. The Committee shall, where possible, review the work of other students whose performance has been better, worse or equal to that of the student in question.

The Departmental Committee will convey in writing the decision of the Committee to the Student, Professor, Chairman, Dean, Registrar and the Student Ombudsman.

The next channel for appeal shall be open to appeals from either the student or the professor. The student/professor may appeal a departmental decision. This must be done within seven (7) days after notification. An appeal in writing should be sent to the Secretary of Council.

The appeal will be considered by the Board of Appeals. This Board will consist of two (2) faculty members and two (2) students. The four (4) members of the Board will receive a copy of the written appeal from the Secretary of Council. The Nominating Committee of Council will establish a panel of professors and students to serve on the Appeals Board on a rotational basis. The Board will itself select a fifth member, who may be a student or a faculty member, and who may or may not be a member of Loyola Campus. The Board will elect one of its own members to serve as Chairman.

In making an appeal to the Board of Appeals, the student/professor must give the grounds for the appeals. If the Board decides that the grounds are insufficient then it may refuse to hear the appeal.

If the Board agrees to consider the appeal, then it will investigate the whole appeal thoroughly: procedures, the Departmental Committee report, and all relevant documentation. It will investigate any irregularities which it finds. If new evidence is presented for either student or professor, it will be sent back to the Board and if it is judged to be substantial, it will be deferred to the Departmental Committee for hearing. Then the Board will have the authority to call in any

witnesses who can present evidence relevant to the case.

The decisions of the Board of Appeals shall require a majority vote (i.e., at least three (3)) by written ballot. if no majority vote is obtained, the decision of the Departmental Committee stands. The decision shall be conveyed in writing to the Student, Professor, Chairman, Dean, Secretary of Council, the Associate Registrar and the Student Ombudsman.

Decisions of the Board of Appeals are final.

16.4.2 SIR GEORGE WILLIAMS CAMPUS (Students registered in BA, B Comp Sc, BEd, B Comm, B Eng, BFA, BSc)

Supplemental Examinations

1. A failed student may not write supplemental examinations.

2. A student may not write a supplemental examination in a repeated course, nor may he write a second supplemental examination in the same course.

3. If a student is granted permission to write a supplemental examination, absence from the examination is counted as a failure and recorded as an 'R' grade.

4. Medical reasons (certified by a physician on his letterhead) constitute a valid excuse for exemption from most of the regulations concerning supplemental examinations. Such medical reasons must be submitted to the Examinations Office within ten days of the missed examination.

(a) A student absent from a regular examination for medical reasons may, if he wishes, write the supplemental examination as his final examination. If he passes he will receive a letter grade and will not be charged with a failure nor a supplemental under the maximum permissible allowances. If he fails he may apply to the Examinations Office to write an additional supplemental examination.

(b) A student absent from a supplemental examination for medical reasons is not considered to have failed the examination and may apply to the Examinations Office for an alternate date.

(c) A student taken ill during an examination and unable to complete the examination must obtain verification from the nurse on duty. Such certification must be submitted to the Examinations Office within ten days of the date of occurrence.

5. Supplemental examinations in courses taken during the regular session must be written during the following July. Supplemental examinations in courses taken during the Summer Session must be written the following December.

6. Supplemental examinations may be written only at one of the following external examination centres in Canada: St. John's, Nfld.; Sackville, N.B.; Murray Bay, Quebec; Montreal, Quebec; Toronto, Ontario; Sudbury, Ontario; Thunder Bay, Ontario; Winnipeg, Manitoba; Saskatoon, Saskatchewan; Banff, Alberta; Vancouver, B.C. Any student wishing to write a supplemental examination at an external centre (outside of Canada) must arrange an appointment with the Director of Examinations before submitting an application.

7. Supplemental examinations are graded by the new Grading System (Section . . .)

8. Application to write a supplemental must be submitted by November 1 for Summer Session, March 7 for graduating students, and June 17 for Winter Session to the Director of Examinations on a form which may be obtained from the Examinations Office. Students applying to write a supplemental examination at an external centre must submit the additional external application form with the regular application form. The required fee must accompany all applications.

Completion of Courses Graded Incomplete

1. A failed student may not complete a course graded incomplete (Inc).

2. A student is ineligible to complete an 'Inc' in a repeated course.

3. Application to complete a course graded 'Inc' must be submitted by October 4 for Summer Session, March 7 for graduating students, and June 17 for Winter Session to the Examinations Office. The required fee must accompany all applications. The limiting dates for submission of work are:

(a) For the first-term courses in the Winter Session, not later than April 1st.

(b) For all other courses in the Winter Session, not later than August 1st.

(c) For all courses in the Summer Session, not later than November 1st.

Repetition of Courses

1. A student who has received credit for a completed course may not repeat that course and may not write a supplemental for purposes of upgrading, except as provided by the Additional Regulations in the Faculty of Engineering.

2. A student may repeat a failed course only once.

3. A student who fails a course that is specifically required for a degree must take the course during the Session in which he next registers. If a required course is taken for the first time during the Summer Session and is failed, the student may postpone his registration for repetition of the course until the session following the regularly scheduled supplemental examination period for Summer Session Courses.

4. If a student repeats a course that is specifically required for a degree and fails it a second time, he/she may apply to Faculty Council for permission to substitute an alternate course. Unless such permission is granted, he/she will not be allowed to continue in the University toward that degree.

Student Request Committees of Faculty Councils

Each of the faculties has a Student Request Committee which is authorized to consider applications from students on matters relating to academic regulations.

The academic regulations for the degree of Bachelor of Computer Science shall be the same as those for the Faculties of Arts, Science, and Commerce and Administration. Any undergraduate student seeking adjust-

ment of an academic regulation should apply on the appropriate form available at the following Faculty offices:
Arts
Asst. Dean of Arts
Fine Arts
Asst. Dean of Fine Arts
Science
Assoc. Dean of Science
Commerce and Administration
Asst. Dean of Commerce
Engineering and Computer Science
Asst. Dean of Engineering

MSP and Independent Students

MSP and Independent students, including those taking courses in the Engineering Faculty, are governed by the academic regulations specified for the Faculties of Arts, Science and Commerce and Administration.

MSP students seeking adjustment of an academic regulation should submit requests to the Student Request Committee of their Faculty.

Independent students must submit all requests relating to University regulations to the Registrar and *not to a dean or faculty council.*

Academic Re-Evaluation

I. General

1. Two alternative methods for handling academic re-evaluation are set out below. The first requires the appointment of a moderator for each course in a department. The second requires the appointment of a reader to each application. Each chairman shall decide which system is more suitable for his own department, and so inform the dean of his faculty.

2. Nothing in these regulations shall be taken to proscribe the right of a faculty member or chairman of a department to review a grade upon request by a student before formal application for a re-read or re-evaluation is made.

3. The term "re-read" refers to the process whereby a student appeals against a grade received *within* a course, i.e., for a research paper, or examination. The term "re-evaluation" refers to the process whereby a student appeals against his final grade in a given course.

II. Appointment of Course Moderators

1. A moderator shall be appointed by the department chairman for each course the department offers.

2. The moderator for a course will normally be named from within the University, but should have no responsibilities in the presentation of the course. However, there may be special circumstances which require the appointment of a moderator from outside.

3. To cover adequately multi-sectional courses it may be necessary to appoint several moderators.

4. The responsibilities of the moderator shall be:

(a) To be aware of the objectives of the course and its evaluation procedure prior to its presentation;

(b) To be aware of the formal examination paper(s) of the course in the event of a candidate applying for a re-read in it;

(c) To attend all formal oral examinations in the course;

(d) To re-read all work representing a major part of the final mark in the course in the event of a candidate applying for a re-read in it.

III. Appointment of Readers

1. A reader shall be appointed by the chairman of the department on the receipt of an application for a re-read. He will normally be named from inside the University, but may be named from outside.

2. The reader shall make himself aware of both the nature and structure of the course and the characteristics of the particular examination.

3. Should the chairman of the department be the instructor of the course, he shall be replaced by the dean.

IV. Re-Reading and Re-Evaluation Procedures

1. The following procedures shall govern the re-reading of examinations whether final or supplemental and the re-evaluation of grades:

2. Any application for a re-read or re-evaluation must be made to the Registrar.

3. An application must be made within 14 days of the release of the grade in question. This delay may be extended in particular cases by the Registrar, but it shall not be extended unless the person applying for a re-read could not reasonably have acted within fourteen days.

4. The application must be submitted to the Registrar's office, and should be presented on the special form obtainable there. It must specify the nature of the re-read or re-evaluation claimed — e.g., for examination or course, and the grounds for the application. The Registrar may require further explanation from the student.

5. The application must be accompanied by a fee of $10.00, which is refundable if the grade is raised.

6. The Registrar shall file the application, and send a copy to the chairman of the department concerned so that the re-read or re-evaluation can be carried out.

7. The chairman of the department shall then have the re-read or re-evaluation carried out by the course moderator if one has been appointed and is available, or by a reader if a moderator has not been appointed or is unavailable.

8. The re-read or re-evaluation shall be carried out privately, not in the presence of the applicant or his representative.

9. When the moderator or reader has completed the re-read or re-evaluation he shall return the work that he has re-read or re-evaluated to the chairman with his own grade.

10. If the moderator or reader agrees with the original grade, the chairman shall return the paper or papers to the Registrar with a statement to this effect.

11. If the moderator or reader changes the grade, the change should be agreed to by both the instructor who gave the original grade and the chairman before the material is returned to the Registrar. If the instructor is

not available, the agreement of the chairman shall suffice.

12. If the original instructor disagrees with the change, the decision as to what grade is to be given devolves on the chairman of the department, who will indicate this fact in his statement to the Registrar.

13. The Registrar shall inform the applicant of the re-read or re-evaluation decision.

14. A grade can be either raised or lowered by a re-read or re-evaluation.

15. The re-reading or re-evaluation procedure should normally be completed within 21 days of the receipt of an application.

16. Either a moderator or a second member of faculty must be present at any formal oral examinations. Application for a re-read or re-evaluation shall be referred to the moderator or the member of faculty who was present at the oral.

17. There is no further appeal once a re-read or re-evaluation decision has been rendered.

18. An application for re-evaluation of a course grade may be refused if the student has not either handed in two copies of all term papers to the instructor or left the original papers with him.

19. Examination scripts shall be retained on the university premises for a period of six months from the close of the examination period.

20. Department chairmen are responsible for ensuring that examination scripts are available for re-reading, and that an appropriate person is always available to carry out re-reads within the time period established.

V. Notes

1. In order to minimize the number of re-read or re-evaluation applications, any faculty member who has papers graded by a teaching assistant shall personally check all failing papers as well as papers close to the borderline for grades or classes before submitting the results.

2. The Student Request Committees of the various faculties shall not be involved in re-reads or re-evaluations.

Conduct During Exams Undergraduate

I. General

1. The candidate taking any form of examination shall not use or attempt to use any material in any form except that which is expressly authorized by those conducting the examination.

2. A candidate shall not speak or otherwise communicate with another candidate or with any person other than the invigilator(s) or instructors except when such communication is expressly authorized by those conducting the examination.

3. Every examination paper shall expressly indicate the materials that a candidate is permitted to have with him during the examination, such as text books with notations, text books without notations, slide rules, etc.

4. Every examination paper shall expressly indicate the length of the examination and special conditions, if any, such as permission for students to work together, etc.

5. The invigilators or other persons conducting an examination may at their discretion transfer a candidate from one location in the examination room to another.

6. It is the duty of invigilators or of other persons conducting an examination to report to the Registrar in writing any apparent instance of cheating as defined in section *II.* 1 below.

7. Where the word "examination" is used in these regulations it shall be taken to mean "examination, test or similar evaluative exercise".

II. Cheating

1. Cheating means any dishonest or deceptive practice relating to an examination, and more particularly, but not restrictively, includes the following:

(a) Making use of any book, paper, script, writing, drawing or anything else not expressly authorized by those conducting the examination;

(b) Communicating during an examination with any person other than one of those conducting the examination for the purpose of obtaining for oneself or providing to another candidate unauthorized assistance in the taking of the examination;

(c) Attempting to do any of the above;

(d) The possession of any unauthorized book, paper, script, writing, drawing or anything else not expressly authorized by those conducting the examination will be accepted as proof of attempting to cheat.

2. A candidate who is to be charged with cheating during an examination shall be so informed by one of the persons conducting the examination, and his taking of the examination shall be suspended forthwith. One of the persons conducting the examination shall take the candidate's examination book, where there is one, as well as any other evidence relating to the charge, and the candidate shall be required to leave the examination room immediately.

3. As soon as is reasonably possible after examination, the evidence shall be delivered to the Registrar, who, if he deems it appropriate to proceed, shall see that a written charge is prepared and transmit it to the dean of the faculty in which the candidate is registered.

4. The charge shall be made in writing, and must be dated and signed by the person who is making it. The allegations must be stated therein in such a way as to inform the candidate with precision what allegations are being made against him.

5. The dean shall send, as soon as is reasonably possible, a copy of the charge to the candidate, and shall inform the candidate of the procedures and sanctions relating to the charge. The dean shall also ask the candidate, in writing, whether he admits or denies the charge.

6. The candidate shall admit or deny the charge, in writing, within 14 days of the date of its mailing to him at the last address given by him to the University. This delay may not be extended unless the candidate could not reasonably have acted within the 14 days.

7. Where the candidate admits the charge, the dean shall apply one of the sanctions set out in *II.*14 below.

8. Where the candidate does not admit or deny the charge as provided above, the

ACADEMIC REGULATIONS 16.4.2 CAMPUS IDENTIFIED REGULATIONS: SIR GEORGE WILLIAMS CAMPUS

dean himself shall conduct a hearing on the charge.

9. Where the candidate denies the charge, the dean shall offer him a choice of:

(a) a hearing by the dean himself, or;

(b) a hearing by a committee of three persons, selected by the dean from a panel nominated by the candidate's faculty council.

Where the candidate chooses the latter form of hearing, he may choose that the committee consist of three faculty members, or two faculty members and one student, or one faculty member and two students. Where he does not make this choice, the dean shall make it.

10. The candidate has the right to be present at the hearing on the charge.

11. The decision of the dean or of the committee, as the case may be, shall be in writing and shall be a reasoned one. A copy of the decision shall be sent to the candidate.

12. The candidate and the Registrar shall have a right of appeal to Senate either against the decision of the dean or the committee, as the case may be, or against the sanction imposed. A notice of such appeal shall be made in writing to the Secretary of Senate within 21 days of the decision referred to above in the case of the candidate, and within 7 days in the case of the Registrar. These delays may be extended in exceptional cases by Senate.

13. The appeal shall be heard and decided in the manner deemed most appropriate by Senate.

14. Where a candidate admits or is found to have cheated the dean shall impose one of the following sanctions:

a. The imposition of a failing grade for the course related to the examination in which the cheating occurred, ineligibility to write a supplemental examination in that course, and the obligation to take and pass the equivalent of one six credit course, in addition to the total number of credits required for the programme in which the candidate is registered.

b. The sanction provided in subsection (a) above and the obligation to take and pass the equivalent of a further one, two, or three six-credit courses in addition to the total number of credits required for the programme in which the candidate is registered.

c. The sanction provided in subsection (a) above, together with loss of all credits for courses taken during the year in which the cheating occurred and suspension from the University for the remainder of that year.

d. The sanction provided for in subsection (c) above and suspension for an additional period of not more than one year.

e. Loss of all credits for courses taken during the year in which the cheating occurred and expulsion from the University.

A year shall begin on September 1 and end on August 31 if the charge relates to an act occurring in the winter session, and from June 1 to May 31 if the charge relates to an act occurring in the summer session.

15. Should a candidate either admit or be found to have cheated as provided above for the second time he shall be expelled from the University.

16. A sanction of suspension or expulsion as provided above is subject to confirmation by the Rector of the University.

17. Should a charge against a candidate not be proceeded with or upheld, the dean of the candidate's faculty and the Registrar shall take the appropriate steps for the candidate to be evaluated.

18. Wherever reference is made above to a dean or any other official of the University, and the dean or other official is unable to exercise his functions, the person who is replacing him shall carry out those functions.

Plagiarism Undergraduate

I. General

Plagiarism, for the purpose of these regulations, includes the presentation or submission by a student of another person's work as his own.

II. Procedures and Sanctions

1. If an instructor has reason to believe that a student has committed plagiarism, as defined above, he shall immediately inform the student concerned and discuss the circumstances with him.

2. After such discussion, the instructor shall:

(a) decide that no further action is necessary, or;

(b) require that the work be resubmitted with appropriate changes, or;

(c) give the student an 'R' grade in the course for which the work was done, or;

(d) refer the matter to the chairman of the department.

3. If the instructor's decision is that set out in 2(a) or 2(b), the matter shall be considered closed. If the decision is that set out in 2(c), the student may appeal it to the chairman of the department.

4. Should a student appeal a decision as set out in 2(c), the chairman of the department shall:

(a) uphold the award of the 'R' grade, or;

(b) cancel the 'R' grade and decide no further action is necessary, or;

(c) cancel the 'R' grade, and require that the work be resubmitted to the instructor with appropriate changes.

The chairman's decision shall be final.

5. If the matter is referred to the chairman of the department, as set out in 2(d), and an appropriate departmental committee exists, he shall refer it to that committee.

6. If an appropriate committee exists, the committee shall review all the circumstances with the instructor and the student, and shall:

(a) decide that no action is necessary, or;

(b) require that the work be resubmitted with appropriate changes, or;

(c) decide that a formal charge shall be made against the student.

If the committee's decision is that set out in 6(a) or 6(b), the matter shall be considered closed.

7. If the matter is referred to the chairman of the department as set out in 2(d) and no appropriate departmental committee exists,

the chairman shall review all the circumstances with the instructor and the student, and shall:

(a) decide that no action is necessary, or;

(b) require that the work be resubmitted with appropriate changes, or;

(c) decide that a formal charge shall be made against the student.

If the chairman's decision is that set out in 7(a) or 7(b), the matter shall be considered closed.

8. If either the appropriate committee or the chairman of the department decides that a formal charge shall be made against the student, the chairman shall send that charge to the dean of the faculty in which the student is registered.

9. The formal charge to the dean shall be made in writing, and be dated and signed by the chairman of the department. The allegations must be stated there in such a way as to inform the student with precision what allegations are being made against him.

10. In the event that the instructor is himself chairman of the department, the dean of his faculty shall appoint another member of the department to act in his place.

11. The dean shall send, as soon as is reasonably possible, a copy of the charge to the student and shall inform the student of the procedures and sanctions relating to a formal charge. The dean shall also ask the student, in writing, whether he admits or denies the charge.

12. The student shall admit or deny the charge, in writing, within 14 days of the date of its mailing to him at the last address given by him to the University. This delay may be extended in exceptional cases by the dean, but it shall not be extended unless the student could not reasonably have acted within the 14 days.

13. Where the student admits the charge, the dean shall apply the sanction set out below.

14. Where the student does not admit or deny the charge, the dean himself shall conduct a hearing on the charge.

15. Where the student denies the charge, the dean shall offer him a choice of:

(a) a hearing by the dean himself, or;

(b) a hearing by a committee of three persons, selected by the dean from a panel nominated by the student's faculty council.

Where the student chooses the latter form of hearing, he may choose that the committee consist of three faculty members, or two faculty members and one student, or one faculty member and two students. Where he does not make this choice, the dean shall make it.

16. The instructor and the student have the right to be present at the hearing on the charge.

17. The decision of the dean or of the committee, as the case may be, shall be in writing and shall be a reasoned one. A copy of the decision shall be sent to the instructor and the student.

18. The student shall have the right of appeal to Senate against the decision of the dean or of the committee, as the case may be. A notice of such appeal shall be made in writing to the Secretary of Senate within 21 days of the decision referred to above. This delay may be extended in exceptional cases by Senate.

19. The appeal shall be heard and decided in the manner deemed most appropriate by Senate.

20. A student who admits that he has committed plagiarism or is found to have committed plagiarism as set out in a charge under paragraph 9 shall be expelled or suspended from the University for the remainder of the year and not more than one additional year, such year beginning on September 1 and ending on August 31 if the charge relates to an act occurring in the winter session, and from June 1 to May 31 if the charge relates to an act occurring in the summer session; or have imposed any of the lesser penalties available to the instructor as set out in 2 (b) or 2 (c). All credits for courses taken during the full year as described herein shall be cancelled.

21. Should a student either admit or to be found to have committed plagiarism as set out in a charge under paragraph 9, for the second time, he shall be expelled from the University.

22. A sanction of suspension or expulsion as provided above is subject to confirmation by the Rector of the University.

23. Should a charge of plagiarism as set out under paragraph 9 against a student not be upheld, the dean of the student's faculty shall take the appropriate steps to have the work that was the subject of the charge evaluated.

24. Wherever reference is made above to a dean or any other official of the University, and the dean or other official is unable to exercise his functions, the person who is replacing him shall carry out those functions.

ACADEMIC REGULATIONS 16.4.2 CAMPUS IDENTIFIED REGULATIONS: SIR GEORGE WILLIAMS CAMPUS

17 Medals and Prizes

17 Medals and Prizes

17.1 Loyola Campus

17.1.1 GRADUATION

The Loyola Campus Medal — presented to a student who has displayed distinctive leadership ability through both academic and non-academic achievement.

The Governor General's Medal — presented by His Excellency, the Governor General of Canada, and awarded to the highest ranking student graduating with the degree of Bachelor of Arts.

The Loyola Science Medal — awarded to the highest ranking student graduating with the degree of Bachelor of Science.

The Loyola Commerce Medal — awarded to the highest ranking student graduating with the degree of Bachelor of Commerce.

The Loyola Engineering Medal — awarded to the highest ranking student graduating with the degree of Bachelor of Science (Engineering).

The Malone Medal — presented by the Loyola Students' Association in honour of Rev. Patrick G. Malone, S.J., and awarded to the graduating student who has made the outstanding contribution to non-academic activities on the Loyola Campus.

The Michael Watson Prize — awarded to the graduating student with the highest standing in Biology.

The Celanese Canada Limited Prize for Chemistry — awarded to the graduating student with the highest standing in Chemistry.

Merit Award, The Society of Chemical Industry — Canadian Section — awarded to the student majoring or honoring in Chemistry with the highest standing in the final year of this programme.

The Celanese Canada Limited Prize for English — awarded to the graduating student with the highest standing in English.

The Economics Medal — awarded to the graduating student with the highest standing in Economics.

The Accountancy Prize — awarded to the graduating student with the highest standing in Accountancy.

The Business Administration Prize — awarded to the graduating student with the highest standing in Business Administration.

The French Language Prize — presented by the Government of France and awarded to the graduating student who has shown the most progress in French language courses.

The German Language Prize — presented by the Government of the Federal Republic of Germany, and awarded to the graduating student who has shown the most progress in German language courses.

The Philosophy Medal — awarded to the graduating student with the highest standing in Philosophy.

The Physics Medal — awarded to the graduating student with the highest standing in Physics.

The Renée Vautelet Prize for Political Science — awarded to the graduating student with the highest standing in Political Science.

The Mme. Alfred Thibaudeau Prize for Political Science — presented by Miss Madeleine Thibaudeau, and awarded to the graduating student with the second highest standing in Political Science.

The Theology Medal — presented by the Most Reverend Leonard J. Crowley, and awarded to the graduating student who has been most creative and productive in the field of Theology.

The Brodrick Award — established in honour of Dr. Robert Brodrick, and awarded to a graduating student athlete who has been outstanding in academic and extracurricular endeavours.

The Dr. Jacques Smith Memorial Prize — presented by Dr. Kurt Ekler in memory of Dr. Jacques Smith, and awarded to the graduating student with the highest standing in Biology, who is planning to pursue a career in medicine.

The Loyola English Medal — presented by the Loyola Foundation in honour of Rev. Gerald MacGuigan, S.J., and awarded to the graduating English Honours student who has written the best English Honours essay.

The O'Connor-O'Hearn History Prize — awarded to an outstanding graduating student in History, who has combined leadership with academic achievement.

The William H. Atherton Prize for History — awarded to a student for outstanding research in Canadian History.

The A. G. Hooper Prize — awarded for the best essay on a given subject in the literature of the Middle Ages, the Renaissance or the XVIIth Century.

17.1.2 UNDERGRADUATE

The Chemical Institute of Canada Prize — awarded to the student majoring, specializing or honouring in Chemistry with the highest standing in the penultimate year of this programme.

17.2 Sir George Williams Campus

17.2.1 GRADUATION

The Birks Medal — presented by Henry Birks & Sons (Montreal) Ltd., and awarded to the highest ranking student graduating with the degree of Bachelor of Arts.

The Mappin Medal — presented by Mappin's Ltd., and awarded to the highest ranking student graduating with the degree of Bachelor of Science.

The Frosst Medal — presented by Charles E. Frosst & Co., and awarded to the highest ranking student graduating with the degree of Bachelor of Commerce.

The Chait Medal — awarded to the highest ranking student graduating with the degree of Bachelor of Engineering.

The Alfred Pinsky Medal — awarded to the highest ranking student graduating with the degree of Bachelor of Fine Arts.

The Computer Science Medal — awarded to the highest ranking student graduating with the degree of Bachelor of Computer Science.

Civil Engineering Medal — awarded to the graduating student with the highest standing in Civil Engineering.

Electrical Engineering Medal — awarded to the graduating student with the highest standing in Electrical Engineering.

Mechanical Engineering Medal — awarded to the graduating student with the highest standing in Mechanical Engineering.

Association of Alumni Award — awarded to the graduating student who, in the opinion of the Scholarship Committee, has by his activities, achievements and interests won the outstanding commendation of his fellows and of the faculty.

The Robert C. Rae Prize in Applied Social Science — awarded to the graduating student with the highest standing in Applied Social Science.

The Sun Life Prize in Economics — presented by the Sun Life Assurance Company of Canada, and awarded to the graduating student with the highest standing in Economics.

The Governor-General's Medal — presented by His Excellency, the Governor General of Canada, and awarded to the graduating student showing the highest achievement in English language and literature.

The French Prize — awarded to the graduating student with the highest standing in French.

The Bogdan Zaborski Medal — awarded to the graduating student with the highest standing in Geography.

The Martin Lewis Memorial Prize in History — awarded to the graduating student with the highest standing in History.

The Interdisciplinary Studies Prize — awarded to the graduating student with the highest standing in Interdisciplinary Studies.

The Modern Languages, Classics, or Linguistics Prize — awarded to the graduating student with the highest standing in Modern Languages.

The W. R. Fraser Medal for Philosophy — presented in memory of W. R. Fraser, professor emeritus, and awarded to the graduating student with the highest standing in Philosophy.

The Herbert F. Quinn Medal for Political Science — awarded to the graduating student with the highest standing in Political Science.

The J. W. Bridges Medal for Psychology — presented in honour of Dr. J. W. Bridges, professor emeritus and awarded to the graduating student with the highest standing in Psychology.

The Boyd Sinyard Prize for Religion — awarded to the graduating student with the highest standing in Religion.

The Everett C. Hughes Medal — presented in honour of Professor Everett C. Hughes, and awarded to the graduating student with the highest standing in Sociology.

The Canadian International Paper Company Prize in Biology — awarded to the graduating student with the highest standing in Biology.

Merit Award, The Society of Chemical Industry — Canada Section — awarded to the student majoring or honouring in Chemistry with the highest standing in the final year of this programme.

The Corporation of Professional Chemists of Quebec Prize — awarded to the graduating student with the highest standing in any one of the programmes accepted by the Corporation of Professional Chemists of Quebec.

The Geology Medal — awarded to the graduating student with the highest standing in Geology.

The Mathematics Medal — awarded to the graduating student with the highest standing in Mathematics.

The Physics Medal — awarded to the graduating student with the highest standing in Physics.

The Ross Medal — awarded to the graduating student with the highest standing in Accountancy.

The Finance Medal — awarded to the graduating student with the highest standing in Finance.

The Management Medal — awarded to the graduating student with the highest standing in Management.

The Marketing Medal — awarded to the graduating student with the highest standing in Marketing.

The Quantitative Methods Medal — awarded to the graduating student with the highest standing in Quantitative Methods.

17.2.2 UNDERGRADUATE

The Chemical Institute of Canada Prize — awarded to the student majoring, specializing, or honouring in Chemistry with the highest standing in the penultimate year of this programme.

The Helen McNicoll Art Prize (Helen Galloway McNicoll, Canadian Painter - 1879-1915) — to be awarded annually to an undergraduate student entering the third year in Fine Arts. The prize will be awarded in alternate years to students who have shown outstanding talent in Visual Arts and to students who have excelled in Art History (preferably Canadian or North American). The prize will be awarded upon the recommendation of the Faculty of Fine Arts.

The Montreal Economics Association Award — awarded to the student majoring, specializing, or honouring in Economics with the highest standing in the penultimate year of the programme.

Hebrew Culture Organization of Canada Prizes — The Samuel Kizell Memorial Prize and another prize, both awarded for excellence in the study of the Hebrew language.

Prix du Département de Français

Prix du Consul général de Belgique

Prix du Consul général de France

Prix du Consul général de Suisse

17.2.3 SPECIAL

First Graduating Class Award — presented by the first graduating class of the Faculty of Arts, Science and Commerce, known as the Guinea Pig Club, for the most outstanding new contribution, either academic or extra-curricular, to student life.

NOTE: Awards will be made when merited only.

18 Student Services

Table of Contents

18.1 DEPARTMENT OF PHYSICAL EDUCATION AND ATHLETICS
- 18.1.1 Intramurals
- 18.1.2 Intercollegiate
- 18.1.3 Facilities

18.2 OFFICE OF GUIDANCE SERVICES, CONCORDIA UNIVERSITY
- 18.2.1 Counselling
- 18.2.2 Reading Training Centre
- 18.2.3 Guidance Information Centre
- 18.2.4 Canada Manpower Centre — SGW Campus

18.3 SCHOLARSHIP AND FINANCIAL AID INFORMATION
- 18.3.1 Concordia Wide
- 18.3.2 Loyola Campus Only
- 18.3.3 Sir George Williams Campus Only

18.4 STUDENT SERVICES-LOYOLA CAMPUS
- 18.4.1 Office of the Dean of Students
- 18.4.2 Music — Loyola
- 18.4.3 Programme Development
- 18.4.4 The Workshop
- 18.4.5 Foreign Students
- 18.4.6 Health Services
- 18.4.7 Campus Ministry — Belmore House
- 18.4.8 Canada Manpower Centre
- 18.4.9 Residence — Loyola Campus
- 18.4.10 Loyola Campus Centre
- 18.4.11 Legal Information Service
- 18.4.12 Office of the Judicial Officer

18.5 THE LACOLLE CENTRE

18.6 STUDENT LIFE-SIR GEORGE WILLIAMS CAMPUS
- 18.6.1 Student Life
- 18.6.2 Student Services
- 18.6.3 Student Health and Accident Insurance
- 18.6.4 Child Care
- 18.6.5 Health Services
- 18.6.6 Bookstore — Sir George Williams Campus
- 18.6.7 Food Services
- 18.6.8 Chaplains
- 18.6.9 Security

18.7 OMBUSDMAN
- 18.7.1 Ombudsman — Loyola Campus
- 18.7.2 Rights and Responsibilities of Members of the University — SGW Campus and the SGW Ombudsman Office

18.1 Department of Physical Education & Athletics

Director
Dr. EDMUND F. ENOS

Assistant Director of Athletics
MR. GEORGE SHORT
Assistant Director of Athletics
MR. DOUGLAS DAIGNEAULT
Co-ordinator of Women's Athletics
MRS. PATRICA BOLAND
Assistant Co-ordinator of Women's Athletics
MISS JANE TANNER

Co-ordinator of Men's Intramurals
MR. ROBERT PHILIP
Sports Information Director
MR. MICHAEL HICKEY
Head Coach Varsity Hockey
MR. PAUL ARSENAULT
Athletic Therapist
MR. GARY CUMMINGS
Athletic Trainer & Equipment Manager
MR. RUSSELL BLACKWELL
Business Manager
MR. ARTHUR NOSEWORTHY

DEPARTMENT OF PHYSICAL EDUCATION AND ATHLETICS
7200 Sherbrooke St. W. 482-0320 Ext. 730
(2160 Bishop St. - 879-5840)

The Department of Physical Education and Athletics is designed to offer a complete and diversified programme to meet the varied interests of today's students. The programme has been cited as one of the outstanding contemporary models in the country. The aim is to provide an opportunity for all students to participate and not just the dextrous few who play varsity sports.

18.1.1 INTRAMURALS

The Intramural programme, which operates on both the Loyola and Sir George campuses, offers a varied selection of popular and individual sports for men and women under the supervision of professionally-trained instructors. The program is divided into three separate classifications:
Co-ed Recreational — provides students with recreational physical activity in a relaxed social setting.
Co-ed Instructional — provides students with expert instruction in the fields of martial arts, modern dancing and sports.
Competitive Intramurals — designed to accommodate the entire student body, and to provide keen competition in both team and individual sports.

The activities offered include: Aikido, Archery, Badminton, Basketball, Body-building, Boxing, Broomball, Cheerleading, Curling, Fencing, Fitness Classes, Floor Hockey, Football, Golf, Hockey, Ice Skating, Jazz Ballet, Judo, Karate, Kung Fu, Modern Dance, Netball, Outdoors Club, Riflery, Ringette, Rock Jazz, Ski-Conditioning, Soccer, Softball, Table Tennis, Tae-Kwon-Do, Tai-Chi, Tennis, Volleyball, Weightlifting and Yoga.

Concordia students may sign up for activities at either campus.

18.1.2 INTERCOLLEGIATE

Because varsity teams are limited in number the junior varsity level has been set up to allow greater numbers of students to participate. It operates as an extension of men's intramurals, and acts as a training ground for the varsity level.

The traditionally strong Varsity programme is primarily for students with playing experience. The 1975-76 academic year marked the first time that there was one unified department representing both the Sir George and Loyola Campuses. The new Concordia Varsity Squads are expected to maintain the excellent reputation enjoyed by Loyola and Sir George in the past. Any student wishing to participate in Varsity Athletics is subject to QUAA and CIAU eligibility rules, which state that the student must be enrolled as a full-time student at the University. The Women's Varsity Programme offers women students the opportunity of competing at the intercollegiate level within the Quebec University Athletic Association.

18.1.3 FACILITIES

The south campus is the focal point of all Physical Education action on the Loyola

Campus, and includes full-length playing fields, outdoor activities, and a modern $3,000,000 physical education centre.

The centre contains facilities for men and women, a spacious gymnasium, and an ice arena. Other areas include a training and rehabilitation centre equipped with ultra-sonic and hydro-therapeutic equipment; an activities room; administration offices; numerous dressing rooms; a press box; snack bar; table tennis; a combatives room for individual contact sports and a weight-training room equipped with a 16 station universal gym.

The Sir George intramural programme is centered in Birks Hall and in the Downtown YMCA on Drummond St. The other facilities include the Royal Montreal Curling Club, H.M.C.S. Donnaconna and the Concordia Ice Rink. Details on all activities are included in the Department of Physical Education and Athletics Calendar which is issued at registration. For further information, call 482-0320, Ext. 730 (Loyola Campus) or 879-5840 (Sir George Campus).

STUDENT SERVICES
18.1.3 DEPARTMENT OF PHYSICAL EDUCATION & ATHLETICS: FACILITIES

18.2 Office of Guidance Services Concordia University

Director
J. A. SPROULE, BA, MPsSc

Assistant Directors
F. W. DENTON, MA
J. P. HALE, BA

Counsellors
R. C. BONCORE, BA, MASc
A. J. CONLON, BA, BTh., MEd
J. C. GELLERT, BA, MSc
J. GOLDNER, BA, BCom., BSW
S. M. GRAUB, MA, DEd
D. P. KREDL, BA, MEd
D. M. PLUMMER, BA, MEd

Counsellors, Evening Staff
B. BULTZ, MA, PhD
E. GUTBRODT, BA, PhD
D. J. McKIRNAN, MA
J. J. SKENE, BA, MEd
P. WRIGHT, BSc, PhD

Consultant Psychiatrist
G. DA SILVA, MD

Guidance Librarians
V. CUMMINS, BA, MLS
D. GOLDBERG, BA, MLS

Reading and Study Skills Counsellor
D. P. OSBORNE, BA

Canada Manpower Counsellors
J. AMESSE
P. DAGENAIS, BA
G. RAIL, BCom—Manager
O. RAYSON

OFFICE OF GUIDANCE SERVICES

Loyola Campus
Centennial Hall
6935 Sherbrooke St. W.
Room M10
Phone 482-0320 Local 473

Sir George Williams Campus
1455 de Maisonneuve Blvd. W.
Room H-440
Phone 879-2879

The Concordia Office of Guidance Services had its origin in the establishment of an office of student counselling in the early years of the University. Its functions have widened in scope to include: (1) provision of individual and group counselling (2) an information service with special emphasis upon graduate and career planning (3) reading skills development and study skills programmes (4) research into factors affecting student progress and into the programmes and practices used in the Office of Guidance Services.

18.2.1 COUNSELLING

As practiced in the Office of Guidance Services, counselling covers the full range of problems inherent in the human experience. Specifically they may be grouped as follows:

Academic Counselling: which includes such problems as course planning, planning a major or honours programme, university familiarization and decisions pertaining to post-graduate training.

Vocational Counselling: the individual is helped to make a realistic career choice based upon his interests, abilities and other needs, reconciled with the available opportunities. In fact, there are many combinations of abilities, personality factors and needs that will lead to success in the same job for different reasons. Similarly there are many jobs that might fulfill the needs of one individual.

Personal Counselling: many students have problems that don't devolve directly from their role in the University, but nevertheless affect their sense of well-being, e.g., family problems, social problems, depression, feelings of isolation and others.

Discussion with a trained counsellor is usually helpful in clarifying the issues and finding a way of coping with these problems. In practice students' problems overlap into all three areas mentioned above. Needless to say anything revealed to a counsellor is held in the strictest confidence.

18.2.2 READING TRAINING CENTRE

The Reading Training Centre offers sev-

eral courses a year, each course has four schedules of day and evening sessions. These programmes are planned to help the student develop the skills necessary for the maintenance of acceptable academic standards.

The main focus is on the techniques of efficient reading and study skills since printed material is still the primary source of learning. Some direction is given, however, in the associated learning skills of listening, note-taking and using the library.

The basic aims of the Effective Reading Programmes are:

1. To teach the skills of effective reading:
   a) rapid reading
   b) skimming and scanning
   c) study reading
2. To demonstrate study methods and to stimulate self-development in these skills.
3. To create awareness of purpose in all reading activities and to retain flexibility in adapting rate and technique to such purposes.

When acquired, these skills lead to an increase in the rate of reading and to improvement in the ability to understand and process materials at a faster rate. Skills are learned and developed through lecture, demonstration and practice. Controlled reading films, skimmers and reading accelerators are used to help the student gain facility in reading tasks.

18.2.3 GUIDANCE INFORMATION CENTRE

It is the aim of this centre to provide students with information as an aid to their making appropriate choices and decisions, particularly as related to graduate and career planning.

The centre maintains an extensive and up-to-date library of educational and occupational information, including a collection of university announcements from Canada and abroad, directories of universities, disciplines and programmes, compilations of financial aid for postgraduate studies, information on graduate school admission tests, a collection of career materials, guides to special service, travel and work programmes abroad, information on companies offering employment and pamphlets written to assist in the preparation of curriculum vitae and personal résumés. There is also a collection of books and pamphlets treating the general themes of love, family life and personal development.

18.2.4 CANADA MANPOWER CENTRE — SGW CAMPUS
2020 Mackay Street 283-5177

This service, staffed and operated in cooperation with the Canada Manpower Centre, functions to assist students in exploring opportunities for part-time, summer and full-time employment. Notices from employers are posted and students are invited to discuss these with a Placement Officer who will assist in arranging interviews with employers' representatives as appropriate.

The extensive information services of the Canada Manpower Centre and the Guidance Information Centre are of particular interest to those undergraduates, graduating students and graduates who wish to fully explore career opportunities with a view to permanent employment.

All those who wish to use the services of the Canada Manpower Centre should register early. Those seeking permanent employment should register soon after the academic session opens as many employers begin recruiting visits in mid-October. Students seeking temporary summer work are advised to register as early as January. An open invitation is extended at all times of the year to students who wish to discuss their employment and career plans.

For Canada Manpower Centre — Loyola Campus, please see § 18.4.8.

18.3 Scholarship and Financial Aid Information

Loyola Campus
FREDA HAFFEY
Adm. Room 126
482-0320 Ext. 349

Sir George Williams Campus
JUDY STYMEST
H-405
879-5983

Financial Aid and scholarship information is available on both campuses of Concordia University.

These offices exist solely to help students find the sources of financial aid available to them; to explain the current regulations and norms of eligibility and to assist students in solving individual budgetary problems.

18.3.1 CONCORDIA WIDE SCHOLARSHIPS

A scholarship is awarded in recognition of outstanding academic achievement.

If a student holding a scholarship decides to change faculty, he will retain the scholarship only on condition that he receives the approval of the Scholarship Committee.

No student may hold more than one scholarship from the university at any one time.

Concordia University Entrance Scholarships

A number of Tuition Scholarships are available to students entering University 1. They are awarded by the Scholarship Committee on the basis of academic achievement during the first three semesters of CEGEP. Applications are available from the Financial Aid offices and must be returned prior to March 1. These scholarships have a value of $500, and are renewable as long as the same high level of achievement is maintained.

BP Canada Scholarship: Number 2, value $500 each. To be awarded to students in a discipline related to the petroleum industry.

General Motors of Canada Limited Scholarships: Concordia University has been allocated $1,000.00 scholarships for each of two students who are in the final two years of their program. Ideally, there should be one student in the penultimate year and one student in the final year of study. Students eligible for scholarships must be in one of the following disciplines: Engineering, Business Administration, Economics, Commerce or Finance. The student must have career objectives applicable to the automotive industry and the scholarship will be conditional that the students work for the company prior to receiving the scholarship award.

Scholarships Offered by Companies' Associations and Societies

Bank of Nova Scotia Bilingual Exchange Scholarships: Six annual one-year undergraduate and graduate awards are available, three to French-speaking candidates and three to English speaking candidates. Undergraduate awards are for $1,500.00 tenable in the second to last year of a first university degree programme. Graduate awards are for $3,000.00 and graduate students will be expected to outline their proposed programmes of study. English-speaking winners may attend any Canadian French-speaking university or college and French-speaking winners may attend any Canadian English-speaking university or college provided it is a member, or federated with, or affiliated to, a member of the Association of Universities and Colleges of Canada. Apply to the Director of Awards, Association of Universities and Colleges of Canada, 151 Slater St., Ottawa, Ontario. Completed applications must be sent to the above address to arrive not later than March 1st.

Harry F. Bennett Education Fund: The purpose of this Fund is to make loans to deserving students who need financial assistance to enable them to study Engineering Sciences at university level and who have proved themselves by successfully completing their first year in Engineering or the equivalent. The Engineering Institute of Canada, 2050 Mansfield Street, Montreal, Quebec.

The Building Trades Joint Committee Scholarship: A five-year scholarship is available to a student entering into the Faculty of Engineering. This award covers full tuition

fees for five years subject to a satisfactory academic standing. Applicants must be the sons of employees engaged in the construction industry in the District of Montreal. Mr. Armand Brisebois, Personnel and Office Manager, The Construction Industry Joint Committee of the Region of Montreal, 3530 Jean-Talon St. West, Montreal, Quebec.

Canadian Federation of the Blind Bursary: Bursary assistance is awarded to a registered blind person or his parents. In awarding this bursary, preference will be given to members of the Canadian Federation of the Blind and in particular to those people domiciled in the Province of Quebec. Mr. Gordon L. Mc. Gilton, Corresponding Secretary, Montreal Branch, Canadian Federation of the Blind, 1172 St. Matthew Street, Montreal, Quebec.

Canadian Forces Benevolent Funds: The Canadian Forces Benevolent Funds consider applications from veterans for bursaries on behalf of their sons or daughters who are full-time students. Apply to the nearest local office of the Department of Veterans' Affairs.

Celanese Canada Limited: Several entrance scholarships in any course leading to a baccalaureate degree offered to the children of employees or annuitants of Chemcell or its subsidiary companies. Further information and application forms should be requested directly from the Director of Awards, Association of Universities and Colleges of Canada, 151 Slater St., Ottawa, Ontario. Completed forms, in triplicate, are to be sent directly to the same address to arrive not later than June 1st.

Consumers Glass Company Limited University Education Awards Plan: Open to children or wards of employees and retired employees of Consumers Glass Company Limited for a full-time course of study in any Canadian university or college recognized by the Association of Universities and Colleges of Canada. Value: $750.00 per year for a maximum of four academic years, or until a first degree is obtained, whichever occurs first. Awards are automatically renewed provided the students establish continuing eligibility and successfully complete the preceding academic year. Further information and application forms, which must be submitted by June 30th, may be obtained from the Director of Awards, Association of Universities and Colleges of Canada, 151 Slater St., Ottawa, Ontario.

Continental Can Company Limited (Canadian Scholarship Plan): The Carle C. Conway Scholarship is offered to the children or grandchildren of the Company's employees. Application forms should be requested from the plant managers or district sales managers. The completed forms, in triplicate, are to be sent to the Director of Awards, Association of Universities and Colleges of Canada, 151 Slater St., Ottawa, Ontario.

The Continental Insurance Companies (Canadian Scholarship Plan): University entrance scholarships in courses leading to baccalaureate degrees may be applied for by the natural or adopted children, stepchildren or legal wards of one of the Continental Companies operating in Canada. Further information and application forms may be obtained from the Director of Awards, Association of Universities and Colleges of Canada, 151 Slater Street, Ottawa, Ontario. Applications must be sent directly to the same address no later than June 1st.

Government of Quebec Department of Natural Resources Scholarships: The Department of Natural Resources of Quebec offers bursaries to enable students to take a university degree in geology in the Province of Quebec. Further information may be obtained from the Secretary, Scholarship Committee, Quebec Department of Natural Resources, Parliament Buildings, Québec, Québec. Also open to graduate students in Metallurgy, Mining, Engineering and Geology.

Gulf Oil Canada Limited: Several university entrance scholarships are awarded annually to the children, natural or adopted, of employees and annuitants of Gulf of Canada and its subsidiary companies in Canada. Further information and application forms should be requested from the Director of Awards, Association of Universities and Colleges of Canada, 151 Slater St., Ottawa, Ontario. Completed applications, in triplicate, are to be sent directly to the same address to arrive not later than June 1st.

Imperial Oil Higher Education Awards: Imperial Oil Limited offers, annually, free tuition and other compulsory fees to all children or wards of employees and annuitants who proceed to higher education courses. The courses may be taken at any Canadian university or other approved institution of higher learning. Each award is tenable until the attainment of a first degree or for a maximum of four years. To be eligible a student must attain an average of 70% or more in a college year upon which application is based. Further information and application forms may be obtained from The Secretary, Committee on Higher Education, Imperial Oil Limited, 111 St. Clair Avenue West, Toronto, Ontario.

Iron Ore Company of Canada (Scholarship Plan): A limited number of entrance scholarships for study towards a first degree are offered to children or wards of employees or annuitants or deceased annuitants of the parent or subsidiary companies. Further information and application forms should be requested from the Director of Awards, Association of Universites and Colleges of Canada, 151 Slater St., Ottawa, Ontario. Completed applications, in triplicate, are to be sent directly to the same address to arrive not later than June 1st.

Lebanese Syrian Canadian Association: The Lebanese Syrian Canadian Association award annually a series of scholarships to students of Lebanese, Syrian descent. The Chairman, Scholarship Committee, Lebanese Syrian Canadian Association, 40 Jean-Talon East, Montreal, Quebec.

Leonard Foundation Scholarships: Applications for scholarships must be filed before March 31st of each year. Preference in the selection of students for scholarships shall be given to the sons and daughters of clergymen, school teachers, Officers, Non-Commissioned Officers and Men (active or retired) who have served in Her Majesty's Military, Naval or Air Forces, graduates of the Royal Military College of Canada, members of the Engineering Institute of Canada, members of the Mining and Metallurgical Institute of Canada. Mrs. R. B. White, Senior Trust Officer, Canada Permanent Trust Company, 253 Bay Street, Toronto 1, Ontario.

Quebec Cartier Mining Company: A limited number of four-year or first degree entrance scholarships are offered to candidates whose parents or legal guardians have been employees of the company for at least four years. Further information and application forms may be obtained from the Director of Awards, Association of Universities and Colleges of Canada, 151 Slater Street, Ottawa, Ontario.

R.C.A.F. Benevolent Fund: The Royal Canadian Air Force Benevolent Fund has made provisions for loans for the benefit of former R.C.A.F. personnel or their dependents. Apply to R.C.A.F. Benevolent Fund, 685 Cathcart Street, Montreal, Quebec.

Texaco Canada Merit Scholarship Programme: Several entrance scholarships to provide up to a maximum of the first four years of undergraduate study may be applied for by dependent children, natural or legally adopted, of employees or annuitants or of deceased employees who died while employed by Texaco Canada. Application forms are obtainable by an employee from his supervisor. Completed applications, in triplicate, must be sent to the following address to arrive not later than June 1st: Director of Awards, Association of Universities and Colleges of Canada, 151 Slater St., Ottawa, Ontario.

Financial Aid

Government Loan Plans: In all the Canadian Provinces a basic qualification for financial aid is that the applicant be a Canadian citizen or landed immigrant with one year's residence and domicile in the province to which he is applying. This would be the province where his/her parents make their home.

The Province of Quebec: The Province of Quebec has an extensive program of student loans and bursaries available to students. For applications contact the Director, Financial Aid.

Physically Handicapped: Students in any faculty who are Canadian citizens and have been resident and domiciled in Quebec for two years, may apply for an outright grant if they have suffered from poliomyelitis, tuberculosis, certain forms of cardiac trouble, or some other physical disability. Apply to the Director, Financial Aid.

Ontario: Apply to the Director, Financial Aid.

New Brunswick: Apply to the Department of Youth and Welfare, Fredericton, New Brunswick.

For the Provinces of Alberta, British Columbia, Manitoba, Newfoundland, Nova Scotia, Prince Edward Island and Saskatchewan, write to the Provincial Department of Education.

Children of War Dead (Education Assistance) Act: Under this Act fees up to $800.00 and monthly allowances are provided for children of Canadian war veterans whose death was attributed to military service in World War I, World War II, or the Korean War. Apply to the Superintendent of Welfare Services at the nearest DVA District Office.

United States Students: Due to new statutory regulations required by the Education Amendments of 1972 all parents of students who wish to apply for Federal interest benefits must file a Parent's Confidential Statement with the College Scholarship Service, Box 176, Princeton, New Jersey 08540. Request that it be sent to Concordia University, Loyola Campus, CSS Code No. 0932.

Maine and Oregon — Apply through the United Student Aid Fund, form 1070, available at your bank.

Students from other states — Apply to the Higher Education Assistance Corporation. Applications are available at your bank.

Due to the tight money situation, it is essential that you apply to the bank where your parents have an account, as early as possible.

NOTE: APPLICATIONS FOR GOVERNMENT AID SHOULD BE MADE AS SOON AS POSSIBLE. DO NOT WAIT FOR REGISTRATION.

Bursaries

Due to the greatly increased demand for financial aid, all students must apply first to their own province and/or state and accept maximum loan and bursary aid from these sources. Thus, Concordia University funds cannot normally be used to compensate for a student's failure to apply for and accept the maximum government assistance available to them. If a student needs more than his maximum government assistance, a bursary may be granted.

The basic principle in awarding financial aid is that the primary obligation to pay for an education rests with the students and

their parents. This means that a student is expected to have savings from his summer employment and that parents must contribute according to their ability.

The Financial Aid Office exists solely to assist students and to help them find financial aid should they need it.

The IBM Canada Bursaries: Donated by the IBM Company as part of the IBM Canada Bursary Program. Awarded annually to needy undergraduates in any year and in any faculty who are in good academic standing. Value: $1000. Apply as soon as possible to the Director, Financial Aid.

The Birks Family Foundation has established a plan of annual contributions to the Student Aid Fund of recognized Canadian Universities for the creation of the Birks Family Foundation Bursaries. The bursaries are awarded by the Foundation on the recommendation of the University Scholarship Committee and are not restricted to faculty or year and may be renewed. The number and amount of such awards may vary annually, depending upon the funds available for the purpose from the Foundation.

B'nai B'rith Hillel Foundation: A limited number of bursaries are available. Amount of each bursary granted from this fund may vary according to the need of the deserving student in any year or any faculty. Apply to Hillel House.

Canadian Italian Business & Professional Men's Association: Bursaries are awarded to students of Italian origin or descent by the Association. Apply to the President, Trust Fund Committee. Application forms may be obtained from the Association at 892 Cremazie Blvd. W., Montreal.

National Council of Jewish Women of Canada, Montreal, Section, Bursaries: A limited number of bursaries are awarded by the Council upon the recommendation of the Financial Aid Director. Academic standing and financial need are considered in making the award. Although there is no legal obligation, the Council hopes that the holder will, if possible, return the money at some future time so that other students may be helped.

Lebanese Syrian Canadian Association: The Lebanese Syrian Canadian Association award annually a series of scholarships to students of Lebanese, Syrian descent. Apply to The Chairman, Scholarship Committee, Lebanese Syrian Canadian Association, 40 Jean-Talon East, Montreal, Quebec.

St. Andrew's Society Bursary: $200.00 — Established by the St. Andrew's Society of Montreal, for a needy student, preferably of Scottish blood, proceeding to a degree. Administered by the St. Andrew's Society. Apply: Director, Financial Aid.

Financial Aid for Overseas Students

The scholarships, bursaries and loans offered by companies, associations, societies, foundations, departments of education and other government agencies are generally not available to students from overseas. Therefore, students studying on a student visa who require financial aid should contact their own department of education.

The Canadian International Development Agency offers training assistance to most developing countries with which Canada has a cooperation agreement; however, the student must be nominated by his/her own government.

Students should make sure of adequate finances before coming to Canada.

A minimum of $3000.00 Canadian would be required for one academic year. If a student does not plan to return home during the summer, four months of living expenses as well as summer tuition should also be provided for.

Concordia University Graduate Fellowships

A number of graduate fellowships have been established and will be awarded on the basis of academic achievement and the recommendation of the program in which the student is registered.

General Information

The Concordia Graduate Fellowships are awarded on a one-year basis. The amount of the awards varies from $2000 to $3500.

Eligibility

Candidates must be registered full-time in a graduate program with at least one year of residence remaining, and must have shown above average academic achievement.

How to Apply

A student applying simultaneously for admission to graduate studies at Concordia and for a Concordia Fellowship should send a copy of the Fellowship application form (available from the Research Officer or the graduate program director); a copy of the graduate studies application form together with a copy of all post-secondary transcripts and two reference form letters to the graduate program director of his/her department.

Deadline

The deadline for receipt by the graduate program director of the Fellowship application form with the appropriate documents is February 1.

Evaluation

Applications and transcripts are evaluated by the Graduate Awards Committee.

Announcement Date

It is expected that the names of the winners of the Concordia Graduate Fellowships will be announced on April 1.

Further Information

For further information, please contact Ms. A. Williams, Research Officer, Concordia University, Sir George Williams Campus, 879-5852.

Province of Quebec Graduate Fellowships

The Minister of Education of the Province of Quebec has a generous programme of Graduate Fellowships available to students presently residing in Quebec. It is important to stress that these Fellowships are based primarily on High Academic Standing. Candidates requiring financial assistance and not having a high academic record should apply to the Province of Quebec, regular loans and bursary department. Forms are available from the Financial Aid Office on each campus.

Guidance Information Centre

The Centre collects information and application forms, if available, on loans, bursaries, scholarships, fellowships, grants-in-aid, etc. This includes aid offered by private foundations, associations and companies, from both Canadian and foreign sources.

Liaison Office

Opportunities exist for some students to assist the Liaison Office visiting CEGEPs and High Schools. Other help is required by the office from time to time during the year assisting in mailing, packaging and typing. Payment varies according to project. For more information contact the Liaison Office, Room N211 (Norris Building) or 879-4233, or Room AD-510 (Administration Building) or 482-0320, local 264.

18.3.2 LOYOLA CAMPUS ONLY
Scholarships:

Funded by The Loyola Foundation and restricted by the donors to Loyola Students.

The Malone Scholarships

The Malone Scholarships are awarded to students on the Loyola Campus who have combined high academic achievement with leadership ability, commitment to and involvement in the community. Three scholarships. Value full-tuition. One in each year.

Endowed Scholarships

Avon Products of Canada Scholarship: Book Bursary $50.

The Lilley F. Barry Scholarships: Number: Four. Value: $500 each.

The Gordon Bennett Memorial Scholarship: From the estate of the late Mr. Gordon Bennett. Number: 7. Value: $500 each.

The Charles J. Brown Scholarship: Donated by Mr. William J. Brown in memory of his father. Number: Two. Value: $400 each.

Ursula Carling Scholarship: From the estate of Mrs. U. Carling. Number: Two. Value: $500 each.

The Francis J. Dowling Scholarship: Fro the estate of the late Francis J. Dowling. Number: One. Value: $150.

The Michael and Patricia Kindellan Memorial Scholarship: Established by the Kindellan Family. Number: One. Value: $200.

The Kenneth J. McArdle Memorial Scholarship: Donated by Mrs. Mary McArdle. Offered to students in Science. Number: Two. Value: $400 each.

The R. C. Moore Memorial Scholarship: Open to a Loyola Campus student who does not already possess a scholarship, enrolled in either Honours Mathematics or Specialization in Mathematics (formerly Major in Mathematics) and entering U3 to be awarded on the basis of the marks obtained in Mathematics courses taken during U1 and U2. Number: One. Value: $150.

Mrs. John Moriarty Scholarship: From the estate of Mrs. John Moriarty. Number: One. Value: $300.

The Winnifred O'Reilly Memorial Scholarship: From the estate of Mrs. W. O'Reilly. Number: One. Value: $200.

The Clarence G. Smith Memorial Scholarship: From the estate of Mrs. Elizabeth M. Smith in memory of her son, Clarence G. Smith. Number: Two. Value $500 each.

St. Ignatius Men's Association Scholarship: Donated by the Members of the Association. Number: One. Value: $200. Open to students in Arts.

The James Weber Memorial Scholarships: Awarded in memory of a member of the Class of 1970. Number and value varies.

Bursaries

The Loyola News Memorial Bursary: Awarded annually to a student who has combined community involvement and a 70% average. The student may apply or be nominated. Number: One. Value: $450.

The George V. Uihlein Memorial Bursary: Awarded annually to a student who has an outstanding record in nonathletic extra-curricular activities and not less than a "B" average. The student may apply or be nominated. Number: One. Value: $100.

Touche Ross & Co. Bursary: Awarded annually to a student who is completing his penultimate year and will be entering his final year, majoring in accountancy in the Faculty of Commerce, and who intends to pursue the qualification of Chartered Accountant. Number: One. Value: $200.

Loan Funds

Through the generosity of the Birks Family Foundation, the *B'nai B'rith Hillel Foundation* and the *National Council of Jewish Women,* a certain amount of money has been placed with Loyola Campus to help students who demonstrate need and responsibility. Apply to Director, Financial Aid, Loyola Campus.

Loyola Campus Alumni Student Loan Fund: The loan fund exists to aid students who are in financial difficulties. Because of limited resources, the trustees of the loan fund will consider loans to students who: 1) have been successful in their set of final examinations at Loyola; 2) are prepared to

repay the loan by October 1st, 1977. Apply to Director, Financial Aid. Application must be made before January 1st, 1977.

Part-time Students Loan Fund: The LESA has placed funds on deposit to enable part-time students to borrow up to $200 for 3 months. Apply to Director, Financial Aid.

18.3.3 SIR GEORGE WILLIAMS CAMPUS ONLY

Undergraduate Scholarships

Note: These awards are made on the basis of academic standing and recipients are selected from the Academic Honours List. No applications are necessary unless otherwise indicated.

Association of Alumni Presidents' Scholarship: A scholarship in the amount of $100.00 is awarded to any student in any year or faculty on the basis of outstanding academic achievement during the preceeding academic year.

The Late Captain Melville Greenshields Scholarship: This scholarship in the amount of $500.00 will be awarded to a deserving student of Art for the furtherance of his studies on the recommendation of the Fine Arts Faculty.

Compton-Lamb Memorial Fund: This scholarship established in memory of the late Neil Compton and Sidney Lamb shall be awarded annually in the Department of English. The recipient must be registering in the last five courses of an English Honours Programme. Application should be made to the Chairman, Department of English.

John A. Hale Memorial Scholarship: This scholarship has been established in memory of the late John A. Hale, a student of Sir George Williams University. This scholarship will be awarded annually to a deserving student entering the third year of a Bachelor of Computer Science programme on the recommendation of the Chairman, Department of Computer Science.

Henry F. Hall Scholarship: Established by the Faculty and Staff of Sir George Williams University in recognition of the many years of service given to the University by the late Dr. Henry F. Hall. This scholarship is awarded annually on the basis of merit to a student in any faculty of the University day or evening division.

Lucille Irvine Memorial Scholarship: This scholarship is awarded annually on the recommendation of the Chairman, Department of Psychology to an outstanding student of Psychology in either the day or evening division. This scholarship was established by Mrs. William Broidy in loving memory of the late Lucille Irvine, a devoted teacher and a former member of the university staff.

Kodak Scholarship: These scholarships will be awarded to Cinema students of outstanding merit upon the recommendation of the Faculty of Fine Arts.

Maynard Metcalf Scholarship: In the day division, a scholarship of $100.00 is awarded to a student in any year or faculty for outstanding scholastic achievement during the preceeding academic year.

Helen Mcnicoll Art Prize: This prize is to be awarded in alternate years to third year students who have shown exceptional talent in Visual Arts and to third year students who have excelled in Art History (preferably Canadian or North American). Both selections are to be made upon the recommendation of the Faculty of Fine Arts. Value according to funds on hand.

The P.T.R. Pugsley Memorial Scholarship: Established by friends of the late Professor Pugsley to commemorate his many years of service as senior Professor of the Faculty of Commerce of Sir George Williams University. The scholarship of $150.00 is awarded annually to an outstanding student in the Faculty of Commerce, day or evening division.

Weldon Scholarship: Awarded annually to a deserving student in the Faculty of Engineering. The value of this scholarship fluctuates depending on current interest rates.

Zeller's Scholarship: In the day or evening division, one scholarship of $100.00 to be awarded on the basis of high scholastic achievement in the third year of the Commerce degree curriculum.

Undergraduate Scholarship-Bursaries

Note: These awards are made on the basis of financial need and high academic standing. Applications for these awards should be forwarded to the Financial Aid Officer unless otherwise stated.

Arthur Andersen Company Scholarship-Bursary: A sum of money made available to students in any faculty with good academic standing who demonstrate financial need.

Association of Alumni Scholarship-Bursary: $100.00 is awarded annually to an undergraduate student in any faculty on the basis of need and academic standing.

Joel Birenbaum Memorial Bursary: This bursary of $450.00 is awarded each year, in memory of Joel Birenbaum, a student of Sir George Williams University. This award will be made to a needy, worthy student in the Faculty of Science. The value of this bursary may fluctuate depending on the current interest rates.

Henry I. Chinks Memorial Scholarship or Bursary: Awarded annually on the basis of need and academic standing to an evening student in the Faculty of Science, in the field of Chemistry. Recipient is chosen by the Chairman, Department of Chemistry.

Joseph Gilbert Joyce Memorial Scholarship or Bursary: This scholarship or bursary shall be awarded to an evening student in any faculty or year. The basis of award shall be academic standing, financial need and promise in his chosen field of study. The late Rev. J. G. Joyce, during his twenty-four

STUDENT SERVICES
18.3.3
SIR GEORGE WILLIAMS CAMPUS ONLY

years' ministry at Verdun United Church, maintained a deep interest in the evening division of the University. This scholarship is established according to his conviction that knowledge and higher education should be available to those who seek to make a creative contribution to the development of mankind.

Alvin J. Guttman Scholarship-Bursary: A sum of $100.00 is available annually to a student from Africa or Asia.

Michael Hendriks Memorial Scholarship-Bursary: This award shall be granted to a final year student in the Faculty of Fine Arts based on academic excellence and financial need.

Marsh & Mclennan Centennial Scholarship or Bursary: The Marsh and McLennan Limited Centennial Scholarship or Bursary shall be awarded annually to an undergraduate student who has completed at least one year at Concordia University. Selection shall be made based upon need and academic standing. (Preference will be given to a Commerce student.)

Nathan H. Messer Scholarships: Two scholarship-bursaries shall be awarded annually to needy, worthy students entering their final year and majoring or honoring in Accountancy.

Ela Moll Memorial Bursary: This bursary of $50.00 is awarded each year in memory of Ela Moll, a Fine Arts student of Sir George Williams University. This award will be made to a needy, worthy student in his/her second year, day division, B.F.A. programme in the Faculty of Fine Arts. Apply to the Fine Arts Faculty.

P.E.O. Scholarship: In the day or evening division, a scholarship of $50.00 is awarded annually to a female student in any year who demonstrates scholastic ability and has the need of financial assistance to pay her tuition fees.

Walter H. Pike Scholarship-Bursary: This bursary of $150.00 will be awarded to a deserving all-round student from any faculty.

Myer F. Pollock Scholarship: Awarded annually, to a needy worthy student in the Faculty of Engineering. The value of this award fluctuates depending on the current interest rates.

The Anne Savage Memorial Fund: This bursary of $50.00 is awarded each year in memory of Anne Savage, painter and art educator. It is given to a deserving student in the Faculty of Fine Arts, upon the recommendation of the Faculty of Fine Arts Faculty Council. Applications should be made through the Fine Arts Faculty.

Walter Stenhouse Bursary: This bursary of $75.00 established by Mrs. E. Pavey and Mrs. J. Tombs, and awarded under the auspices of the Arts Club of Montreal, is available annually to a final year student in the Faculty of Fine Arts, on the recommendation of the Faculty of Fine Arts. Apply to the Fine Arts Faculty.

Undergraduate Bursaries

Note: These awards are made on the basis of financial need subject to passing grade. All applications should be submitted to the Financial Aid Officer unless otherwise indicated.

Birks Family Foundation Bursaries: These bursaries are available to students recommended by the University, in any faculty. They may be renewed annually, until graduation, for successful students. The number and amount of awards may vary from year to year depending on the funds available from the Foundation.

The Ethel Campbell-P.E.O. Memorial Bursary: Established by Colin C. Campbell in loving memory of his wife, Ethel May Routledge Campbell, and in recognition of her dedication to the aims, objectives, and the moral principles of the P.E.O. Sisterhood. This award is to assist a female student toward the financing of her university programme.

The J. P. Copland Memorial Bursaries: In the day and evening division to be awarded on the basis of financial need and academic standing.

Ralph B. Hood Bursary Fund: In the day and evening division, to be awarded on the basis of financial need and academic standing.

Knights Of Pythias (Syracuse No. 9) Bursary Fund: This fund was established by the Knights of Pythias to assist students in the day or evening division of the University.

Theodore Ronis Memorial Bursary: This bursary of $50.00 is established by the friends of the late Theodore Ronis to perpetuate the memory of his friendship through the annual gift of a bursary to a deserving student. The recipient should be studying preferably but not necessarily towards a Bachelor of Commerce degree, and be a male student.

Royal Albert Lodge Bursary: The sum of $400.00 to be awarded as scholarships and bursaries to: a) children of members of the Royal Albert Lodge, b) children of members of other Masonic Lodges. If neither a nor b qualify, any worthy student may apply and receive the scholarship or bursary.

Student Loan Fund

This Fund is administered on behalf of students by the Office of the Dean of Students. The Fund is to provide students with short term assistance with the maximum amount not exceeding $150.00. Students must demonstrate an ability to repay as contracted. Under no circumstances will loans be made for the purpose of paying tuition or registration fees. Application forms and additional information may be obtained from the Financial Aid Office — Room H-405.

18.4 Student Services Loyola Campus

Dean of Students
ALFRED AUDET, BA BPed LTh

Assistant Deans
BRIAN T. COUNIHAN, BA M.Ed.
BLUMA LITNER, BA MA

Financial Aid Director
FREDA HAFFEY

18.4.1 OFFICE OF THE DEAN OF STUDENTS

The Student Services is that dimension of the campus staff which works, on a day-to-day basis, primarily with
—Specialized Services to Students
—Learning Opportunities Outside the Classroom
—Campus Life in General

The objective of the Student Services Staff is to work with others to make life on campus an educationally rewarding, exciting and enjoyable experience. People in Student Services are not teachers or students or administrators "per se". They are counsellors, community workers, doctors, nurses, programme consultants, organizational resource people and educators in a broad sense. Particularly in the Dean of Students Office we deal with para-academic events in a co-ordinating or initiating role. Our objectives are to complement the classroom in helping development of personal objectives. We have people in Student Services who can help, who can give a cohesive unity to the university experience.

18.4.2 MUSIC-LOYOLA

Music-Loyola, a cultural animation programme of the Dean of Students Office, provides the Loyola community with many opportunities for personal musical development.

Areas are available to individual students for instrumental practice, and use of the listening facilities is provided by the considerable record library.

Individual instrumental lessons may be arranged by consulting the Dean of Students Office. Increased emphasis has been laid on this aspect of personal artistic development and understanding.

Lunchtime listening programmes are provided during the academic year.

The larger ensembles available are the Choral Society and the Loyola Orchestra. Entrance to all activities is by audition. Small ensembles, e.g. Recorder groups, vocal ensembles, are provided on demand.

The Loyola Orchestra, a unique amateur group in the city, has attained a reputation for musicianship and high standards of performance, and has accompanied solo artists of international standing in concert performances. The Choral Society, a 50-voice ensemble, shares with the orchestra a standard of achievement in the presentation of major choral works, and the two groups provide the basis of Loyola's contribution to music-making in Montreal.

Music-Loyola also provides examples of the best in professional performances of music in their invited artists programmes during the year. For further information call 482-0320, local 249.

18.4.3 PROGRAMME DEVELOPMENT

The Programme Development Sector of the Dean of Students Office has the primary objective of creating events and opportunities for students that have substantial learning value outside the classroom environment. While the staff of the Programme Development Sector initiates and organizes some of its own programs and events, the staff, as well, is available to help any person or group with interesting ideas. The office also serves as a resource and information centre and can provide students, faculty or staff with the necessary links and contacts that may be required.

The Programme Development staff is particularly interested in exploring the area of education and learning experiences at the Loyola campus. In past years a variety of workshops and events were offered in relation to LEARN, a year long project initiated and sponsored by Programme Development.

STUDENT SERVICES 18.4.3 LOYOLA CAMPUS: PROGRAMME DEVELOPMENT

As well as being involved with Lacolle and Learning Development programmes on and off campus, the Programme Development Sector actively collaborated in the creation of the Conversations with Arts and Science series and coordinated all the events during the "Under the Influence Week." In the summer of 1976, the "Light and Easy" Outdoor Film Series was launched in collaboration with the Communication Arts Department. In 1976-77 the staff pursued its activities with the Faculty of Arts and Science as well as collaborated in the creation and maintenance of a Learn Co-op.

The Programme Development Sector is located in the Dean of Students Office, Administration Building, Room 135. Phone 482-0320, locals 341 and 343.

18.4.4 THE WORKSHOP

The Workshop is a unique para-academic experience in the fields of photography and silk screen printing. Open for membership to students, artists and the entire community at large, Workshop members have an opportunity to use excellent darkrooms, silk screening equipment resource material, as well as partake in weekly silkscreen classes, group exhibitions and numerous other workshops throughout the year.

The Workshop has a permanent exhibition gallery with year round exhibitions in photography and silkscreen prints.

The Workshop is staffed by a full-time Director and part-time experts in the fields of photography and silk screen. It is located at 7308 Sherbrooke St. W. and is opened from 10:30 a.m. to 10:00 p.m. Monday through Friday.

18.4.5 FOREIGN STUDENTS

Foreign Students' Insurance: Students who are neither Canadian citizens nor landed immigrants are not eligible for the provincial medical programme. The high cost of hospital care in Québec has prompted Concordia to arrange for an insurance policy which covers hospital expenses up to $5.000.00 incurred as the result of accidental injury or an illness. The premium for this policy is approximately $65. It is included in your fees. This policy is required of all Foreign Students. Students from the United States who have comparable coverage at home may be exempted. For details about the coverage or exemption, contact the Foreign Student Advisor at Student Services.

Foreign Students Finances: It is most important for a student to have sufficient financial resources to cover his total expenses for at least one year of study. As you are no doubt aware, immigration regulations normally do not permit student visa holders to accept any form of employment during the academic year. A guideline of expenses which a student may expect to incur, in addition to his tuition fees, follows: (It should be noted that these figures can be considered minimal).

Books and Supplies	$200.00
Lodging	$900.00
Food	$700.00
Insurance	$ 54.00
Clothing	$200.00
Miscellaneous	$350.00
Plus Tuition Fees	
Cost for one year (approximately)	$3000.00

These costs have been calculated on the value of Canadian currency and cover only the academic year.

Overseas students are expected to present evidence to immigration authorities that they have adequate funds for their studies in Canada.

CONCORDIA OR THE CANADIAN GOVERNMENT DOES NOT GIVE FINANCIAL ASSISTANCE TO OVER-SEAS STUDENTS.

YOU MUST BE A CANADIAN CITIZEN, LANDED IMMIGRANT, OR HOLD A VALID *WORK PERMIT* IN ORDER TO WORK IN CANADA.

Foreign Students English Requirements: All classes at Loyola are conducted in English. Students are expected to have sufficient facility in the use and understanding of the English language to be able to handle his or her programme. No exceptions can be made for students whose fluency is poor; this would probably entail "slowing down" the normal progress of the class. Please be aware of this before making a commitment with us.

18.4.6 HEALTH SERVICES

Located in the Centennial Building across the hall from the Guidance Services, the Health Services is open to all students for confidential health care, information and advice from 9 a.m. to 7 p.m. Monday through Thursday. Friday 9 a.m. to 5 p.m. Closed for lunch from 12 to 1:30 except for emergencies. There are four registered nurses and six doctors of different specialties who come in at varying times throughout the week. Please feel free to drop in or call us at local 480.

18.4.7 CAMPUS MINISTRY BELMORE HOUSE

Belmore House is a Place of Welcome for anyone who wants to feel at home on Campus. It's an old house with a bit of family atmosphere about it, a place to meet other and make new friends, to find out what is going on around the Campus, and a place to get involved in what appeals to you. If your thing is sports, there are intramural teams for that, a ski week, hiking and camping: if it's celebrating life, there is sharing and liturgy,

folk singing and prayer; if it's social issues, there is the grape and lettuce boycott. Archambault Federal Prison, needy families at Christmas, blind children . . . among others.

There are weekends for those who want to get away from it all, go out into the country, and try to put it all together. What is different about Belmore is that it is a house on Campus that is yours, that you can be part of and have a share in running.

Dan Berrigan, Cesar Chavez, John Howard Griffin, Jean Vanier, Lanza del Vasto — these are some of the people who call us to celebrate life, with its challenges and disappointments, success and failures — with a vision towards others and the world around us.

Our aim at Belmore is to offer a variety of ways to deepen our own personal awareness and stir up a sense of social responsibility. All of this through the celebration of being alive.

Drop by sometime. Belmore House is just behind the Campus Centre at 3500 Belmore Avenue (484-4095).

18.4.8 CANADA MANPOWER CENTRE

The Canada Manpower Centre on the Loyola campus has a staff of 5 permanent employees. Their aim is to be of service to students and the Loyola community. It includes 2 professional Counsellors whose essential duties are Career counselling and Placement of Graduates. Their assistant is responsible for placing students in Casual, Part-time, Christmas and Summer jobs.

The CMC(OC) provides facilities to all employers who wish to come on campus to recruit students. This On Campus Recruiting Program begins in November and normally ends in February.

Information Sessions for Loyola Graduates on job search techniques are organized during the academic year in each faculty department. Topics range from writing a resume to the art of selling one's self to the potential employer.

Day and Evening students and Alumni may use our Services. Appointments are arranged for those students who are unable to come during the day.

Career Library: Students are made aware that they have at their disposal a Career Library and reading room in our office situated at 6935 Sherbrooke W.

The Canada Manpower Centre is located on the top floor of the Centennial Building at 6935 Sherbrooke St. W., Montreal—489-3885.

For Canada Manpower Centre—Sir George Williams Campus, please see § 18.2.4.

18.4.9 RESIDENCE — LOYOLA CAMPUS

On campus accommodations are available to approximately 240 day division students. The facilities are versatile by division and can house students in a traditional dormitory style or apartment-suite style room; co-ed or single sex floors and special living groups can be accommodated.

While every effort is made to meet students' requests for single rooms, roommates or particular halls, assignments are made as space allows. Students applying should be advised that rooms on campus are very limited and acceptance to the University does not guarantee admission to the residence. Separate application for on-campus housing must be made to the Director of Residence.

Because of its location and convenience preference would be given to those students taking courses at the Loyola campus.

Off-Campus Housing

Many students choose or are forced because of lack of space on campus, to live in an apartment or private home in the campus vicinity. All students seeking information about apartment and home listings, legal aid and other services available, please contact:

The Off-Campus Housing Service
Hingston Hall, room 101
Loyola Campus
Concordia University
7141 Sherbrooke St. W.
H4B 1R6

Residence Fees

General: Rates for rooms are the same at both Hingston and Langley Hall. These rates do not include meals. Meals may be contracted for separately.

RESIDENCE	SINGLE	DOUBLE
Room*	$760	$650
Activity Fee*	25	25
Damage & Development Fee*	15	15
Damage Deposit (refundable)	50	50
TOTAL	850	740

**Payable at registration and subject to change.*

A room deposit of $50 must accompany each application and will be deducted from the payment due on entrance. The $50 deposit serves as indication for the University that you are a serious applicant for Residence. It does *NOT* guarantee the student a room. PLEASE DO NOT ASSUME THAT YOU ARE ACCEPTED INTO RESIDENCE UNTIL YOU HAVE RECEIVED A LETTER OF ACCEPTANCE FROM THE RESIDENCE OFFICE.

The money will be refunded on request, if the student is not accepted or cancels the room reservation by August 1. Students cancelling after the August 1 deadline will forfeit the $50 deposit.

The room contract covers the rental of linen, blankets and pillows and local telephone service.

The University reserves the right to place the student in whatever room seems to be in the best interests of the student's programme as a whole, but careful consideration will be given to expressed preferences.

No student will be permitted into residence before settlement of his or her account has been made. For this purpose, a receipt covering at least the first term must be shown to the Director of Residence.

Fees do not cover the Christmas holidays. Students who intend to remain in residence over the holidays are required to apply to the Director of Residence by December 1st. There is an extra charge made to remain in residence at this time.

Residence fees may be paid in two installments. The first installment covering the first term, including compulsory fees, must be paid at registration. The second must be paid before January 10.

In cases where cheques are returned to the University marked "Non Sufficient Funds", there will be a $5.00 charge. A $15.00 surcharge will be added onto all unpaid FEES as of January 15. Post-dated cheques will not be accepted.

All residence fees are payable in Canadian Funds or Canadian equivalent and cheques should be made payable to Concordia University.

The University reserves the right to make changes without notice in the published scale of fees, if in the opinion of the University, circumstances so require.

To ensure favourable consideration of your application it is recommended that you apply before June 1.

Meal Plan*

Meals may be contracted for on a yearly basis at a cost of approximately $562.50 for two meals a day, 5 days a week (lunch and dinner) and $757.50 for three meals a day, 5 days a week. Several other plans are in effect and the student may choose the one most suited to his needs. He may also prefer to pay as he goes on an 'a la carte' basis anywhere on campus. Meal plan tickets are honoured at both Hingston Hall Dining Room and the Campus Centre.

**The Meal Plan rates are also subject to change.*

18.4.10 LOYOLA CAMPUS CENTRE

The "Centre", which opened in 1973, is designed to meet the social and recreational needs of students.

The Campus Centre includes a large Main Lounge, the Quiet Bar, three multi-purpose Conference Rooms, The Pub, The Games Room, and a cafeteria.

The operation of the Centre is dictated by a Board of Directors, on which both day and evening students predominate.

Douglas Devenne is the Director of the Loyola Campus Centre.

18.4.11 LEGAL INFORMATION SERVICE

Legal advice and help are offered to all students who may require assistance on matters relating to their legal rights. A student charged with a criminal offence may have an attorney appear for him in all criminal proceedings as well as those originating from infractions of the Highway Code and municipal by-laws. These services are free and confidential. This service may also extend to civil proceedings in which a student is involved as either plaintiff or defendant, the costs of which may be defrayed for students without the necessary financial means.

18.4.12 OFFICE OF THE JUDICIAL OFFICER

Set up to handle misconduct and disruptive behaviour, Student Court is a three-level judicial system, whereby a student accused of having violated the rights of others can be heard and tried by his fellow students. He must be informed in writing of the charges laid against him, and given sufficient time to prepare his defense. Under the guidance of a Student Court Officer, and chosen from a pool of applicants, it is composed of three units: A Preliminary Hearing Board, The College Court, and a Court of Appeals.

The Preliminary Hearing Board is composed of three members and can either dismiss a complaint, or turn the complaint over to the College Court for the hearing.

The College Court consists of five members drawn from the pool, and hears representations for and against the defendant. It must find for or against the defendant and impose an appropriate sentence.

The Court of Appeals is the Court of Final Hearing. It is composed of seven members drawn from the pool and may confirm or reverse the decision of the court, increase or reduce the sentence, or return the case for a new Court hearing. If a sentence of temporary suspension or expulsion is maintained by the Court of Appeals, there is an automatic appeal to the University Board of Governors.

Complaint forms may be obtained from the Legal Information Service Office in Hingston Hall, Room 228B, local 512.

18.5 The Lacolle Centre

The Lacolle Centre for Educational Innovation is an off-campus facility located 40 minutes from Loyola Campus near Lacolle, Quebec. It provides an environment in which people can explore new avenues of learning, and by working collaboratively, enhance their educational experiences on the Loyola Campus.

The Centre, which is in its sixth year of successful operation, functions under the auspices of a 15 member council comprised of students, staff and faculty representatives. This council is responsible to the Vice-Rector and Principal of Loyola campus, and sets the general policies and direction of the centre during regular monthly meetings.

The operational direction is provided by a co-ordinating team which includes Linda Allan, Office Manager, and Marilyn Callan, Co-ordinator. Linda may be contacted for help in scheduling programmes or to provide information concerning the centre and its operation, as well as to receive requests for resource personnel. Marilyn, as well as providing overall co-ordination of the centre, is available for consultation concerning programme design and evaluation. She is also able to provide skills as a resource person to groups wishing to enhance their functioning in areas such as problem-solving and decision making, group leadership, conflict management, goal setting and inter-personal or inter-group communication.

Although each programme at Lacolle produces its own unique group, team or personal experiences, there are general areas into which some of the past programmes may be categorized.

1. Professor and student initiated programmes; class members may spend a weekend at Lacolle relating to each other in a relaxed atmosphere which extends the time and space of the classroom situation. Almost every department on campus has made use of Lacolle in this manner with great success.

2. Courses which are taught in a concentrated period of time at the Centre, such as summer courses in Biology (Ecology) and Astronomy.

3. Student, faculty and administrative associations and organizations use the facility for programme planning, team building and organizational development.

4. Lacolle initiated programmes on and off campus; some of the past programmes have included: an annual Harvest festival at the Centre in October, to which all members of the Loyola community have been invited in order to meet one another and share a festival atmosphere; a "Life Planning Weekend" during which participants dealt with setting personal goals and planning for their attainment; a "Couple's Weekend" which involved individuals in examination of their values and a clarification of how these may be dealt with in the couple relationship; and a five day teaching improvement workshop for faculty members.

On campus, Lacolle has sponsored or co-sponsored several successful events; a week with Lois Phillips examining feminism and Humanism, guest speaker John Holt, prominent author and specialist in education, and R. D. Laing, well known for his contributions to modern psychiatry.

All programme initiators are interviewed by the co-ordinating team prior to going to Lacolle for purposes of goal clarification and planning, and again on return to discuss results of the workshop and reactions to the experience.

Proposals for the use of the centre should be made well in advance. The co-ordinator and office manager are located at 7306 Sherbrooke St. W, and may be reached by phoning 482-0320, local 344.

18.6 Student Life
Sir George Williams Campus

Dean of Students
MAGNUS FLYNN.BCom

Assistant Deans
JACK HOPKINS.BA MSW
DOUGLAS INSLEAY.MSc
JOAN RICHARDSON.BA

Financial Aid Officer
JUDY STYMEST.BA

Advisor to Overseas Students
DAVID CHAN BFA

18.6.1 STUDENT LIFE

The Sir George Williams Campus of Concordia offers a wide variety of out-of-class programmes. Most of these are sponsored and carried out by the different student associations; and many opportunities are created for students to participate in social, special interest groups, student government, informal training in radio, television, newspaper, drama, and many other useful experiences.

In addition to the social and cultural opportunities mentioned above, the University sponsors special support programmes called Student Services. These are described in the following paragraphs. Many students use these resources under varied circumstances, such as a need for more finances, legal, counselling, housing, child care and other needs as required.

Subject to the authority of the Board of Governors, the Concordia Council on Student Life is the body responsible for student service policies and budgets. The Council, replacing U.C.S.L. is scheduled to begin operations in September 1976 and shall also have the authority to study the range of student life on both the Loyola and Sir George campuses of Concordia University.

The Council is composed of 15 students, 5 faculty, 10 student services staff and one non-voting member of the Board of Governors.

Council meetings are open and notices of meetings will be given on both campuses.

18.6.2 STUDENT SERVICES

Orientation

Orientation at Sir George Williams Campus is designed to familiarize new students with the various services and facilities available to them, and to help new students resolve any problems which may be encountered during the initial introduction to university life.

Legal Aid

A number of alumni lawyers have generously offered service to students in need of legal advice. The service does not cover legal fees which may be incurred. Appointments to see a lawyer may be made through the Office of the Dean of Students.

Off-Campus Housing

As there are no residence facilities at the Sir George Williams Campus, the Office of the Dean of Students maintains an off-campus Housing Registry for students seeking accommodations. The Registry represents listings of rooms, room and board, and apartments. The cost, location and particulars of each listing are included.

When considering accommodation, students are strongly urged to refer leases to the Office of the Dean of Students before signing. Students should also be sure to obtain their own copy of a lease immediately.

18.6.3 STUDENT HEALTH AND ACCIDENT INSURANCE

Out-Of-Country Students

The group health and accident insurance plan is COMPULSORY for all out-of-country students attending the Sir George Williams Campus as full-time students.

The plan is compulsory as out-of-country students are not eligible for coverage offered under the Quebec Provincial Hospital Insurance Service. The plan is available for single or married coverage.

18.6.4 CHILD CARE

The Sir George Williams Campus offers Child Care Services for children of students, faculty and staff. Parents may enroll children 2½ to 5 years of age in the Child Care Centre located at 2305 St. Marc St. Application forms and details may be obtained in the Office of the Dean of Students or at the Centre (879-4577).

18.6.5 HEALTH SERVICES

Health Centre
Location: 2145 MacKay Street
Telephone: 879-4010, 4011, 4012
Office Hours:
9:00 a.m. to 10:00 p.m. Monday through Friday during University terms and Summer sessions.
9:00 a.m. to 5:00 p.m. at all other times.

Medical Director:
DR. H. ABRAMOVITCH
6 staff doctors
Registered Nurses:
MRS. J. JOHNSTONE
MRS. P. HUZA
MISS PENNY SOPER
Secretary:
MISS D. WARNOCK

To be seen other than in an emergency situation, or with an acute problem, please telephone for an appointment (generally there is only a day's wait).

Services of the Health Centre are available to all staff, students and faculty members, full or part-time.

The Health Centre is staffed with registered nurses and doctors and is run on a clinic programme. It is open Monday through Friday with a varying schedule of doctor coverage. Multiple, paramedical, and referral agencies in the immediate downtown area are utilized, as well as the general hospitals in this area.

On location the Health Centre provides:

—immediate attention and evaluation of accidents, or any other acute health problem.
—health care information.
—general medical check-ups.
—contraceptive guidance and teaching.
—gynecology, urology.
—periodic blood pressure checks, evaluation and/or referrals for breast clinics, speech therapy, fertility screening, etc.
—immunization for travellers (for total immunization a three month period of time is needed.)
—social disease medicine, infectious diseases. VD DIAGNOSIS AND TREATMENT (MEDICATIONS SUPPLIED FREE OF CHARGE).
—nutrition counselling.
—allergy injections. Patient must provide serum and instruction schedule from the allergist and return to the allergist annually.
—human sexuality and relationship counselling.
—evaluation and referral for all medical specialities, eg. dermatology, opthalmology, orthopedics, obstetrics, family practice, etc.

18.6.6 BOOKSTORE SGW CAMPUS

P. GORE

Books and supplies including art materials may be bought at the Bookstore located on the mezzanine of the Hall Building.

At the beginning of each academic year, required texts are also available from an auxillary sales location in the Birks Auditorium on the main floor of the Norris Building.

It is recommended that students review the return book policy before making any purchases.

18.6.7 FOOD SERVICES

The Food Service Centre ("Caf") is located on the 7th floor of the Hall Building and is open for breakfast, lunch and dinner daily except Saturdays and Sundays. "A la carte" service and special hot meals are provided. Food for special events and parties can be arranged by telephoning Mr. John Douglas, (Saga Food Service Manager) at 879-5807 or 5860. Applications for use of this cafeteria for dances and similar occasions are made to the Dean of Students Office.

The seating capacity is 700. Hours of operation are as follows:

Monday through Thursday
8:00 a.m. - 9:00 p.m.
Friday
8:00 a.m. - 8:00 p.m.

A small eating area is provided in the Norris Building (2nd floor) and is served by vending machines.

Student Pub (7th Floor)

Applications for the use of the Pub are made to the DSA.

18.6.8 CHAPLAINS

University life consists of more than mere "academic". One of the most important non-academic elements in its life is the "pastorale". A truly major concern of the campus ministry is one of meaning and purpose as well as a deep involvement in the matter of the quality of life both within the university community as well as outside, in life in general.

At Sir George there are two full-time Chaplains and five part-time members of the team (often referred to as "The God Squad") working in this area.

In the last few years, our Chaplains have represented the Anglican, Eastern Orthodox, Jewish, Lutheran, Pentecostal, Presbyterian, Baptist, Roman Catholic, and United Church traditions. Although the work of the team has been ecumenical in approach (this has proved to be the most successful in general), the various religious heritages are well-respected and clearly upheld.

During the academic year, the chaplains organize various programmes that generate interest among members of the university community. They are also available for personal religious guidance and counselling.

In various endeavours, the chaplains use an informal and personalized approach. They are an integral part of the community and are ready to assist in any way they can, be it through a simple rap, an intellectual dialogue

on issues, a request for direction or a personal hassle. In brief, they are concerned with the total person, for they have a healthy respect for individual points of view.

18.6.9 SECURITY

Thefts: The best way of preventing thefts is to lock your door, desk, and cabinet. Experience has revealed that equipment, materials and personal belongings may disappear within a matter of minutes when left unattended. Should a theft occur, the Security Department is to be informed immediately. It is stressed that when the above recommendations are followed, there is a reduction in losses.

Identification: Since it is necessary to identify persons on campus, you are required to carry your Concordia Identification Card at all times.

Removal of Equipment and Materials: "Equipment and Materials Pass" must be filled out and signed by the Head of Department for removal of all equipment and materials from this campus. Forms may be obtained at the Security Desks.

Access to Campus After Closing Hours: "After Hours Pass" must be filled out for all undergraduate students requiring access to the campus after closing hours. Forms may be obtained from the Security Desks and Departmental Offices. Security will inform the Health Centre and call police assistance if necessary. They will also direct the ambulance, nurse, doctor or police to the scene of the accident. For minor accidents, the patient should be directed to the Health Centre.

Evacuation of Buildings: Acquaint yourself with the policy of prevention on the job, shop or area of work. Good housekeeping and clean premises are the first essentials in the elimination of fire and accidents.

a. Familiarize yourself with the emergency exits in your area. They all have red exit signs.
b. When the fire bells ring *Continuously,* leave the building using the closest emergency exit.
c. Do not run.
d. Do not use elevators.
e. Stay calm.

In the event of a hazard or emergency, please call the Safety Officer at 879-2888, or the Hall Building Security Desk at 879-4545 or the Norris Security Desk at 879-4515.

Requests for Additional Security: Additional security may be required for conferences, socials, etc. Such requests are to be directed to the Security Department in writing at least 36 hours in advance. The request is to be forwarded to H-116-4.

Parking: There are no parking facilities to students on the S.G.W. Campus.

Cloak Room Services: Requests for Cloak Room services are to be directed in writing to H-116-4.

Lost & Found: All items found are to be turned over to the Security Desks for safekeeping. All claims for lost articles are to be made at these desks.

SAFETY

Emergencies: All emergency situations are to be reported to Security, whether the cause be an accident, sickness, fire, smoke, water leakages, etc. The numbers to call are:

Hall Building and Annexes: 879-4545

Norris Building: 879-4515

Accidents: Call Security immediately for major accidents. The numbers to call are:

Hall Building and Annexes: 879-4545

Norris Building: 879-4515

18.7 Ombudsman

18.7.1 OMBUDSMAN — LOYOLA CAMPUS

Upon the recommendation of the Loyola Students' Association, the Office of the Ombudsman was introduced to the Loyola community in 1972. The position is occupied by a Loyola graduate who is selected by a Search Committee comprised of student and faculty members, who were appointed by the Loyola Faculty Council.

As of 1975 the position will be a full-time one, with the term of office for a single Ombudsman having been extended from one to two years.

The primary role of the Ombudsman is to act as a liaison officer and mediator, in the variety of conflicts that may arise within the Loyola community. The position independent of the usual structures and influences, allows for a certain lack of bias and relative freedom of operation.

A great majority of the cases brought to this office are related to professor-student conflicts, arising over issues including those of grading, personality clashes, and conduct. In cases involving grade appeals, (and these are the most frequent problems), the student, after having discussed the question with his/her professor, may if dissatisfied, contact the Ombudsman. When attempts at resolving the problem informally fail, Departmental Review Committees, comprised of 2 professors and 1 student from that department, are set up to review the situation. If, upon receiving the decision of the Departmental Committee, the student is not fully satisfied, he/she may take the case to a Board of Appeals, consisting of 5 members, 3 professors and 2 students, from outside the department involved. The decision of the Board of Appeals, which will review the procedures used by the department in dealing with the case, is final. The role of the Ombudsman throughout this period is that of coordinator and mediator.

The duties of the Ombudsman also include attempting to resolve difficulties relating to administrative procedures and technicalities. The Office of the Ombudsman is not in any way limited, however, to the above-mentioned areas and will try to deal with whatever difficulties relating in some way to the academic life on the Loyola campus. The Office of the Ombudsman when unable to resolve a situation by itself, will act as a resource centre supplying those involved with the channels that will be able to deal with that particular problems.

In the past, this service has been made use of primarily by the student body. It is hoped that other members of the Loyola community will make full use of this Loyola service as well. This year the Ombudsman's Office will be open every day, morning and afternoon, with special hours for evening students, as yet undetermined. The office is located in the Administration Building—AD 105, and the Ombudsman can be reached by dialing the Loyola number — 482-0320, local 257.

18.7.2 Rights and responsibilities of members of the University (SGW Campus) and the SGW Ombudsman Office

General

1. The system set out herein consists of two related parts: a statement of rights and responsibilities of all who study, teach or work at the University, with associated complaint procedures; a statement governing the setting up and functioning of the SGW Ombudsman office.

2. These regulations apply to the Sir George Williams Campus, not to the Sir George Williams schools.

3. The system applies to students, faculty, administrators and all other employees of the University. However, it does not replace or supersede the terms of the University tenure regulations, the existing official grievance procedures, or any collective agreement that may apply to particular individuals or groups within the University.

a) These regulations do not replace or supersede the regulations relating to Termination of Employment of Faculty Members except as hereinafter expressly provided.

b-i) Whenever a complaint has been lodged against a faculty member under these Regulations, no dismissal procedures arising from the same circumstances shall be set in motion against such

faculty member under the Regulations Relating to Termination of Employment and Suspension of Faculty Members, except in the case provided for in paragraph 7 (a) below.

ii) Paragraph (b-i) above shall not apply where a complaint, lodged against a faculty member under these Regulations, has been discontinued prior to its final disposition.

c) Whenever formal dismissal procedures have been initiated against a faculty member under the Regulations Relating to Termination of Employment and Suspension of Faculty Members, no complaint arising from the same circumstances shall be lodged against such faculty member under the present Regulations.

4. The ombudsman office is an essential part of this system. The manner in which the ombudsmen are to be appointed and their functions are set out in Section IV.

5. It is not only the right but the duty of faculty members and administrators to exercise their authority in areas that fall within their spheres of responsibility. Thus, for example, a faculty member has a responsibility to take whatever immediate action may be necessary to ensure the continuing order of his course just as the person responsible for an area of administration must take whatever immediate action may be necessary to ensure its proper functions.

6. Although a faculty member or an administrator may take immediate action in the exercise of his responsibilities, such as referred to in the preceding paragraph, a person against whom such an action is directed may have recourse to the ombudsman office or to the complaint procedures set out below should he believe that the action was unjustified and that his rights were infringed upon.

7. Any disciplinary action taken by a faculty member or by an administrator other than the kind of immediate action referred to in paragraph 5 shall be taken by way of the complaint procedures set out below, subject to the Rector's right to suspend an individual pending the completion of such procedures.

a) Where the Rector suspends a faculty member, otherwise than upon a final recommendation flowing from a complaint lodged against such faculty member under Regulations Relating to Termination of Employment and Suspension of Faculty Members shall apply.

8. All those who study, teach or work at the University are subject to the laws of the land, and have recourse to those laws. The same holds true for the University as a corporate entity. In the event of an act which appears to be an infringement of an individual's legal rights, it must be the decision of that individual whether or not to take legal action, irrespective of whether he has recourse to the procedures set out herein. Similarly, the University, acting through its duly authorized representatives, itself has the right to take at any time any legal action considered appropriate.

9. Wherever there is doubt or ambiguity regarding any provision in these regulations, or the procedure to be followed, that interpretation or procedure shall be adopted which appears most equitable, consistent with the general purposes and philosophy of these regulations.

10. It is desirable that recourse be had to the procedures in Section III only when it has been impossible to reach an informal settlement of differences, with or without the assistance of the ombudsmen, or when the issue is clearly one that demands formal action.

Rights and Responsibilities

1. A university is an institution of higher education dedicated to the pursuit of truth, and to the advancement and dissemination of knowledge. All those who study, teach or work there must be concerned with maintaining the freedoms essential to these purposes, notably the freedoms to teach; to engage in research, to create; to learn; to study; to speak; to associate and to assemble; to write and to publish. Rights and responsibilities emanate from these freedoms; the rights cannot be maintained unless the responsibilities are accepted.

2. A university has the rights of a duly incorporated institution of higher education, and it has responsibilities to those who are part of it. Each individual member also has rights and responsibilities.

3. To pursue its goals, a university requires protection againts disruption. Neither repression of minorities nor denial of the rights of the majority can be tolerated. Mutual consideration is vital if the freedoms set out above are to be preserved.

4. The individual may exercise his rights only to the extent that they do not infringe upon those of his fellows or of the University. This requires the acceptance of personal responsibility and in particular refraining from such acts as: destruction of property; invasion of premises; disruption of classes or meetings; prevention of free access to or these Regulations, the pro-
visions of the egress from property belonging to or rented by the University; violence; assault and the threat of assault; libel and slander; discrimination against any person on the basis of sex, race, colour, creed or ethnic origin.

Complaint Procedures:

1. These procedures are applicable when there has been an alleged infringement of the rights of an individual or of a group of persons, or of the University itself.

2. Procedures are commenced upon the lodging of a formal complaint. The complaint must be made in writing, and must be signed by the complainant or complainants. The allegations must be stated therein with precision, including specific details as to date, time and place. The complaint must be

delivered to the appropriate authority as defined below within a reasonable delay, and in no case more than three months after the incident or decision complained of.

a) Where the complaint involves an allegation of deception or dishonesty, the above delay shall begin to run from the date of the discovery by the complainant of the alleged deception or dishonesty.

3. The appropriate authority to whom a complaint must be delivered is as follows. This listing is subject to change as changes are made to the administrative structure of the University.

a) The Chairman of the Board of Governors in the event of a complaint against:
Rector;
Secretary of the Board of Governors.

b) The Rector in the event of a complaint against:
Vice-Rector, Academic;
Vice-Rector, Administration and Finance;
Vice-Rector and Principal of Loyola Campus;
Executive Assistant to the Rector;
Assistant to the Rector, Public Relations;
Dean of Students (SGW);
Secretary of Senate;
or anyone working directly for him on the Sir George Williams campus.

c) The Vice-Rector, Academic in the event of a complaint against. Sir George Williams Dean of Arts;
Sir George Williams Dean of Science;
Dean of Commerce and Administration;
Dean of Engineering;
Associate Vice-Rector, Academic;
Associate Vice-Rector, Academic Planning;
Assistant Vice-Principal, Academic;
or anyone working directly for him on the Sir George Williams campus.

d) The Vice-Rector, Administration and Finance, in the event of a complaint against:
Associate Vice-Rector, Administration;
Associate Vice-Rector, Communications;
Assistant Vice-Rector, Relations and Audit;
Assistant Vice-Rector and Treasurer;
Assistant Vice-Rector and Director of Libraries;
Director of Guidance (SGW);
or anyone working directly for him on the Sir George Williams campus.

e) The Vice-Rector and Principal of Loyola Campus in the event of a complaint against:
Registrar;
or anyone working for him on the Sir George Williams campus.

f) The Associate Vice-Rector, Administration in the event of a complaint against:
Assistant Vice-Rector, Physical Resources;
Assistant Vice-Rector, Ancillary Services;
or anyone working directly for him on the Sir George Williams campus.

g) The appropriate Dean in the event of a complaint against a member of faculty, whether full-time or part-time, or in the event of a complaint against anyone else employed in the Faculty for which he is responsible.

h) The administrator listed above as reporting to either the Rector or one of the Vice-Rectors in the event of a complaint against an individual employed in the department or departments for which he is responsible. In this connection, the following allocation of responsibility should be noted:
Executive Assistant to the Rector — Information and Bookings Centre;
Assistant to the Rector, Public Relations — Information and Development Offices;
Dean of Students (SGW) — Athletics Department; Health Centre;
Associate Vice-Rector, Administration — Security Purchasing, Receiving and Shipping, Mail and Printing Departments;
Assistant Vice-Rector, Communications — Personnel Department; Computer Centre; Centre for Instructional Technology; Telephone Services;
Assistant Vice-Rector, Ancillary Services — Food Services; Bookstore.

i) The Dean of the Faculty in which the student is enrolled, in the event of a complaint against a student by a non-student member of the University.

j) The Dean of Students (SGW), in the event of a complaint by one student against another.

4. When a complaint has been made by a non-student member of the University against a student the Dean of the Faculty in which the student is enrolled shall so inform the Dean of Students, and he shall keep him informed of the progress of the case.

5. When a complaint has been made by one student against another, the Dean of Students shall so inform the Dean of the Faculty in which the student is enrolled, and he shall keep him informed of the progress of the case.

6. In the event of a complaint against a graduate student, the Dean of Students shall so inform the Dean of Graduate Studies, and he shall keep him informed of the progress of the case.

7. If one of the persons named as an appropriate authority wishes to lay a complaint against an individual who comes within his own sphere of authority he must address himself to his own immediate superior.

8. The appropriate authority shall acknowledge receipt of the complaint as expeditiously as possible. He shall send copies both of the complaint and of his acknowledgement to the person complained against. If the complaint has been made against a student, a copy of the acknowledgement shall also be sent to the Dean of Students.

9. The complaint shall be enquired into in whatever manner the appropriate authority considers most suitable. The appropriate authority may conduct the enquiry himself or he may assign the enquiry to another individual or to a committee named by him. If the appropriate authority or the individual or the committee concludes that the allegations are founded in whole or in part, the appropriate authority shall take whatever action he deems suitable in so far as he is empowered to do so, or recommend such action to those who have the power to implement it. If the appropriate authority has assigned the enquiry to an individual or to a committee, he may also assign to that individual or committee the function of taking or recommending appropriate action in cases where it is concluded that the allegations are well founded in whole or in part. Since a student can be suspended or expelled from the University only by action of the Rector, any such recommendation must be forwarded to the Rector.

a) Where the appropriate authority, or an individual or a committee assigned by him has concluded that the allegations were founded in whole or in part and has recommended that a faculty member be dismissed, the dismissal provisions of the Regulations Relating to Termination of Employment and Suspension of Faculty Members and not the provisions of paragraphs 12 to 17 below shall apply.

10. Both the complainant and the person complained against must be given the opportunity to make any relevant representations, in person or in writing as they see fit.

11. The decisions referred to in paragraph 9 must be written, signed and dated, and must be reasoned. The appropriate authority shall deliver such decisions to the complainant the person complained against, the administrator to whom the appropriate authority, himself, reports and to the Dean of Students if a student is involved. The Chairman of the Board of Governors shall deliver his decisions to the Board as a whole.

12. Both the complainant and the person complained against have a right of appeal to the Board of Governors. Either party wishing to avail himself of the appeal procedure must deliver a written and signed notice of appeal to the Secretary of the Board of Governors within fourteen days of the rendering of the decision appealed against. This delay may be extended in exceptional cases by the Board of Governors upon application in writing by the person who wishes to appeal, but it shall not be extended unless that person could not reasonably have acted within the fourteen days. The appeal may be taken against either the decision on the merits or against the action taken or recommended, or against both. The notice must state in clear and precise terms the grounds on which the appeal is based.

13. The Secretary of the Board of Governors shall send without delay copies of the notice of appeal to the appropriate authority responsible for the decision which is being appealed, to the opposite party, and to the Dean of Students if a student is involved. The appeal shall be placed on the agenda of the next meeting of the Board.

14. Should the appeal be lodged by the complainant, or should it be lodged by the person complained against in a case where action other than a sanction of suspension, expulsion or dismissal has been imposed or recommended, the Board of Governors shall decide whether to deal with it directly or to set up a review board, composed of persons from either within or without the University or from both, as the Board of Governors judges fit. The decisions of the Board of Governors in the former case or of the review board in the latter case shall be final.

15. Should the person complained against wish to lodge an appeal in a case where a sanction of suspension, expulsion or dismissal has been imposed or recommended, he may choose either that the appeal be dealt with according to the procedure set out in the above paragraph or he may require the Board of Governors to appoint a committee of three persons from outside the University, one of whom must be a lawyer not otherwise in the employ of the University, to hear the appeal. Its decision shall be final.

16. Where the choice referred to in paragraph 15 is not made, the Board of Governors shall decide whether to deal with the appeal according to the procedure set out in paragraph 14 or that set out in paragraph 15.

17. The Secretary of the Board of Governors shall communicate the decision in writing to the persons referred to in paragraph 11.

18. Wherever reference is made above to an official of the University, and that official is unable to exercise his functions, the person who is replacing him shall carry out those functions.

19. Apart from the requirements to inform set out above, any proceedings or decisions in accordance with the provisions of Section III shall be treated as confidential unless all the parties involved expressly agree that they be made public.

The Ombudsman Office

1. The Ombudsman Office shall be composed of three persons already in the employ of the University. They shall be appointed by the Rector acting on the advice of a search committee named by him. The search committee shall be representative of all who study, teach and work at the Sir George Williams campus. Ombudsmen shall be eligible for reappointment by the Rector on the advice of a search committee.

2. Anyone who studies, teaches or works at the campus shall have the right to apply to the Ombudsman office on any matter of

concern to him. The members of the office shall decide between them which of them will handle any particular application or whether they will handle it jointly.

3. The ombudsmen shall be free to enquire into any matter thus brought to their attention, and to make whatever recommendations they judge appropriate.

4. It is expected that the ombudsmen will be able to resolve many problems and conflicts before they reach a stage where formal procedures are necessary. Once formal procedures have commenced, their role shall be limited to conciliation.

5. The appointment of the ombudsmen shall be for two years, and they will be released on a part-time basis from their regular functions.

6. On the conclusion of an enquiry, the Ombudsman Office shall provide the individual who applied for its services with a written report on its disposition of the matter.

7. The ombudsmen shall have the right to refuse to take up any case if for any reason they judge intervention inappropriate.

8. Recommendations of the ombudsmen may bear either on the actions or decisions of an individual or group or on the policies or practices which gave rise to such actions or decisions.

9. Any application to the Ombudsman office and any subsequent enquiries or recommendations, shall be treated as confidential unless all the parties involved expressly agree that the information be made public.

10. The ombudsmen shall have immediate access to all University records, reports or other documents other than those which cannot be released for reasons of confidentiality. If the ombudsmen wish to challenge the decision of an officer of the University with regard to confidentiality they shall have the right of appeal to the Board of Governors. The ombudsmen shall maintain the confidentiality of confidential materials to which they have access.

11. The ombudsmen shall issue a report annually to the University in such a way as to indicate the nature and extent of their operations, while protecting the anonymity and confidence of any individuals who have applied to them or with whom the ombudsmen have been in contact regarding particular cases.

STUDENT SERVICES 18.7.2 RIGHTS AND RESPONSIBILITIES . . . OMBUDSMAN SIR GEORGE WILLIAMS CAMPUS

19 Student Associations

19.1 Student Associations

19.1.1 LOYOLA STUDENTS' ASSOCIATION

1) To achieve organization and order.

2) To achieve cohesion between all groups in attaining common goals within the association.

3) To increase the level and quality of orientation; to build a foundation for the future.

These are the goals of the Loyola Students' Association — YOUR association.

The L.S.A., which is financed mostly through a student activity fee, tries to be aware of students' needs — both social and academic. They strive to be informed in order to comply with these needs. For this reason, the L.S.A. stresses involvement. They invite the students to express their needs —to use the L.S.A. as a sounding board, as a means of communication, as a voice of expression.

The L.S.A. is composed of 3 elements: the Executive, the Board of Directors, and Senate.

Executive: The Executive is headed by two elected co-presidents, who in turn appoint their vice-presidents. The Executive, in an attempt to comply with every aspect of student life, is divided into several departments:

Co-Presidents: The role of the Co-presidents is basically to act as the chief administrative officers of the L.S.A. They oversee all functions and act as spokesmen for the students.

Campus Services: This department concerns itself with services for students on campus. The priorities include the Campus Orientation Program, Carnival, the Yearbook and the Grad Dance.

Education: The Education vice-president oversees such activities as student research projects and all other academic aspects which effect the students. He ensures that students' educational needs are adequately expressed through student representation on University committees.

Financial: The Financial Vice-president handles the finances of the L.S.A. and its member associations. The main objective of this department is to see that all spending is done with the students' interests in mind. This office will now closely observe the relationship between the University and the Provincial Government in terms of Finance and will keep a close check on spending inside of the University.

Information Services: The goal of this department is to keep both the students and the general public informed of L.S.A. activities, and to open communication channels to and from the association.

Internal: This department makes sure that the L.S.A. operates efficiently. It also handles complaints or questions from the various member associations, clubs, and societies.

External: The External Vice-president acts as liaison between the L.S.A. and outside bodies. His office maintains contact with Quebec and national student associations. He is concerned with obtaining and supplying information and input on decisions involving education at the provincial level.

Board of Directors

The Board is the legislative body of the association. It consists of sixteen members elected annually. Representation is in proportion to the number of students enrolled in each faculty. It is the function of the Board to regulate and co-ordinate the policies and activities of the association.

Senate

The Student Senate is the judicial body of the L.S.A. It has jurisdiction over matters affecting student discipline and constitutional interpretation. It acts as guarantor of students' rights as defined by the Bill of Rights of the L.S.A.

Associations

Over forty organizations on campus cover most interest areas. They range in nature and scope from dramatic, musical and recreational to ethnic, academic, professional and political. These associations serve to supplement the student's education, by allowing him to be actively involved in those areas of interest to him.

Publications

The Board of Publications, now in the process of reorganization, will act as a Supervisory Board for all campus publications. These include Loyola News, the official student newspaper, Radio Loyola, Student

Directory, Yearbook, and all other student-oriented publications.

19.1.2 THE LOYOLA EVENING STUDENTS' ASSOCIATION INC.

In March of 1973, the Loyola Evening Students' Association (L.E.S.A.) was incorporated under a Quebec provincial charter. During the same period, the Association Constitution was revised to better reflect changes in Evening Student objectives since the last major change in 1969.

Objectives

The Association has, as its stated objectives:

1) The representation, promotion, and furtherance of the academic interests of Loyola Evening Students.

2) The encouragement of the evening students to participate actively in the Loyola community.

Organization

Through a system of class representatives, elected in the first two weeks of the Winter Session, and an Association Council (a nine member Executive and ten general Coordinators) elected in March of each year, present and future needs of evening students can be identified and acted upon.

Activities

Within the framework of Loyola, members of Council serve as representatives on the main Concordia Administrative Councils.

Council believes it of great importance to maintain a strong representation on these committees as this participation is considered one of the most effective means of advancing Evening Student aims to the Administration.

A further strengthening of L.E.S.A. as an Evening Student body is seen in its participation in an organization of part-time university students.

Meetings and Information

The primary concern of the Association is its member students. Council members may be contacted through the answering service at 488-4048 or in writing, to 2501 West Broadway, Montreal H4B 1R6.

They are also present at:

1) Registration — to assist students to the fullest extent possible.

2) Regular meeting — Agenda, etc. are posted on various bulletin boards throughout the campus.

3) Class representative meetings of which there are at least four per year, one of which is the annual general election in March, where evening students who are not class representatives may participate as non-voting members. Details are posted on bulletin boards.

Council Executive

The titles and functions of the Executive body of Council are detailed below, enabling students to address their queries to the specific officer responsible.

President
Vice-President (Academic)
Vice-President (Communications)
Vice-President (Operations)
Executive Secretary
Treasurer
Senators

19.1.3 LOYOLA OF MONTREAL ALUMNI ASSOCIATION INC.

The objectives of this Association shall be to advance the interests and to promote the welfare of Concordia, of the Association and its members, and to provide a vehicle through which former students of the Loyola Campus of Concordia University may maintain their interest and express their support of their alma mater, to disseminate information among former students relating to developments at the University, to foster continuing contacts between former students, and to conduct projects, organize events and to do all other things necessary and useful for the University.

During the course of the year, the Loyola of Montreal Alumni Association Inc. sponsors the Golf Tournament, the Oyster Party, the Sports Hall-of-Fame, social activities, cultural activities, sports activities, the Past-Presidents' Dinner, an exchange programme between students and members of the Business/Professional community, information sessions by well-known speakers for the benefit of University students and many other events catering to both men and women graduates. The Association also sponsors the selection and presentation of the Loyola Medal to outstanding Canadians. A general meeting is held each year. At this meeting officers and directors for the coming year are elected and all other matters of general business are transacted.

Annual giving by Alumni represents the largest simple source of support to universities and colleges in North America. A regular yearly contribution to the Association aids a variety of programmes at the University.

The Alumni Office is located at 7141 Sherbrooke Street West, in the Loyola Administration Building (AD-233). Information may be obtained at 482-0320 local 421 or 313.

19.1.4 CONCORDIA GRADUATE STUDENTS' ASSOCIATION

The Graduate Students' Association is run by graduate students who have volunteered their time not only to make life more interesting and enjoyable for students at Concordia University, but also to help better student life in all areas within the University. We are here to help you and to see that your needs are met.

STUDENT ASSOCIATIONS 19.1.4 CONCORDIA GRADUATE STUDENTS' ASSOCIATION

Further to our involvement within the academic structures of the University, the Association sponsors two main events for the social enjoyment of the students — the Annual General Meeting and the Orientation Party. Many more activities are presently being planned for the fall. These events are being set with the sole purpose of entertaining graduate students and their families. If you are dissatisfied with what we are doing or have ideas to help make these events better, please let us know.

A Council meeting is held once a month and if you wish to attend please feel free to do so. There is always a need for new ideas and fresh faces.

The Graduate Students' Association is here for you and to help you in any way we can. If you have any suggestions or problems, please do not hesitate to come up and see us at 2145 MacKay Street, room 306 or call us at 879-7219.

19.1.5 DAY STUDENTS' ASSOCIATION—SIR GEORGE WILLIAMS CAMPUS

The D.S.A. is comprised of all full-time undergraduates of the Sir George Williams Campus. It has three basic goals — to provide services and activities needed by students, to act as the spokesman for students in the University, and to provide opportunities for student involvement.

A student fee finances the operation — therefore, priority is placed on giving the students what their money is worth in services and activities. A large part of the budget goes into programming, media, orientation and course evaluation.

There is another need — the wants and desires of the students in the university. Whether it is in the academic or para-academic field, the D.S.A. can be YOUR tool to make your voice heard. Most university bodies have student representatives on them. In addition, the small size of Sir George and its tradition of being especially oriented towards students gives the D.S.A. an advantage few associations have.

But most important of all, the D.S.A. needs involvement. If you have a gripe, come down to the D.S.A. office. If you want to gain some experience in budgeting, management, politics, law, public relations, or who knows what else, then the D.S.A. is the place for you. Or if you're just fed up with sitting on the sidelines, then walk right in. The D.S.A. needs you.

The D.S.A. is governed by a council made up of representatives from each faculty in proportion to their enrolment. Elections are held in March. Then the executives are chosen by election from within the new council.

There are also associations in each faculty: Commerce, Fine Arts, Arts, Science and Engineering. Besides acting in basically the same way as the D.S.A. within their own milieu, they also sponsor departmental clubs. Elections for their councils are in March. They are financed by a fee collected directly from their students.

Pub: The D.S.A. runs a pub near the seventh floor cafeteria jointly with SAGA Foods. It is responsible for capital equipment and keeps a close eye on conditions to ensure that they are what the students want.

Course evaluation: The D.S.A. has recognized the need for a complete and comprehensive course evaluation system at Sir George. Such a system has been instituted, employing a full-time director. A steering Committee oversees the operation made up of both students and faculty, ensuring input from all concerned. The D.S.A., of course, bankrolls and controls the whole system.

There exist, in most departments, councils which are made up of students and faculty. Also, student reps. sit on faculty councils, the Senate, and various committees. This provides for a great student input into such issues as what courses are offered and how the library is run. The representatives are usually elected in September by the various student councils and all full-time undergraduates are more than welcome to apply.

Student Services: Close cooperation between the Dean of Students Office and the D.S.A. is a tradition at Sir George. Together, the two ensure that students' rights are not violated. Also the University Council on Student Life closely oversees the funding and operation of student services. Student representatives are chosen by the D.S.A. Council.

External Affairs: The D.S.A. works closely with the other four Students' Associations of Concordia, recognizing the frequent need for student cooperation. Also, through A.N.E.Q. (l'Association Nationale des Etudiants du Québec) the D.S.A. interacts with CEGEP and university students throughout the province.

Media: The D.S.A. runs a student newspaper (the Georgian), radio station (C.R.S.G.) and television station (C.U.T.V.). Also a student handbook and course evaluation guide is published over the summer. All three media invite student participation.

Programming: We realize that, with the hard pressures of university life, students often need a "break" from the grind. To ensure that they get this, a program committe of the D.S.A. council exists to gather ideas for social activities, with a full-time Programme Director to help carry them out. The emphasis in programming is placed on participation, with a balance between "Quasi-academic" and "pure entertainment" events. Every student is welcome to come in and help with this facet of the D.S.A., whether it be contributing ideas, helping with publicity, or preparing for the programme.

There are certain programs which are run:

Your Orientation to University (Y.O.U.) is run in the fall to welcome both new and old students to the concrete campus. Many activities take place, and a handbook is published. Work on this usually begins in the fall.

Winter Carnival takes place in mid-February. This involves about two weeks of fun and frolic to divert students from the mid-winter doldrums. Preparations for Carnival start around September.

Academic Matters: The main priority in university is, of course, education. Therefore, the D.S.A. is vitally interested in matters affecting the academic side and you should be also.

19.1.6 ASSOCIATION OF ALUMNI—SIR GEORGE WILLIAMS CAMPUS

The Association of Alumni was begun informally by the "Guinea Pig Class" of 1937, the first of many thousands to receive degrees from what was first a College and then a University, both known as Sir George Williams (now part of Concordia University).

The Association was officially incorporated as a non-profit organization on September 21, 1957.

The aims and objectives contained in the charter are to preserve the fellowship of graduates of Sir George Williams; to preserve, extend and promote the interests of the University; and to assist in the furthering of student welfare.

With the merger of Sir George Williams and Loyola producing Concordia University, a new dimension has been added, and for the time being graduates of Concordia from the Sir George Williams Campus are being asked to continue their association with their alma mater through the Sir George Williams Alumni Association.

The Association is guided by a Board of Directors, numbering 30, elected from graduates of the University. Until recently the Association financed its operations through alumni support but it recently concluded an agreement with the University whereby it joined the Development Office and is now financed through that department but retaining its autonomy in all areas except campaigning.

All graduates are automatically members of the Association and receive a monthly newspaper *"The Garnet"*. There is a special classification called *Active Members"* consisting of alumni who make a financial contribution in the current year. Their support entitles them to free library privileges, special social activities such as invitations to the annual Rector's Reception, invitations to concerts, art exhibitions etc. Active alumni members in the Toronto area receive special privileges at York University.

From time to time the Association holds reunions when it is deemed to be timely and appropriate.

The Association of Alumni has for many years provided a special award for a graduating student who in the opinion of the Faculty and students, has made a significant contribution to campus life.

The Association's office is located at 2150 Bishop Street and is under the supervision of Matthew Ram, BA '43. Further information may be obtained by writing the office or calling (514) 879-5898.

19.1.7 SIR GEORGE WILLIAMS PART-TIME STUDENTS' ASSOCIATION

An Advisory Committee consisting of 5 students, 2 faculty members and 1 administrator is the body recognized by the University and authorized to represent part-time students on the Sir George Williams Campus.

An office where part-time students may go for assistance is maintained in H-603. Telephone 879-2832.

REFERENCE

20 Centre for Continuing Education

20.1 Centre for Continuing Education

Director
DOUGLAS POTVIN
Tel: 879-8538

Assistant Director and Coordinator of Educational Travel Programme
DOREEN BATES
Tel: 879-8536

Coordinator of Cultural and Community Programme
GWYNN CHERRIER
Tel: 879-8534

Director of Business and Administration Programmes
KENNETH ETHERIDGE
Tel: 879-8400

Coordinator of Off-Campus Credit Courses and Teacher Training and Certification
JOHN FISET
Tel: 879-8402

Coordinator of Music and Arts Programme
MARCIA LOYND
Tel: 879-8405

Coordinator of English Language Programme
FLOYD TUZO
Tel: 879-2865

OFFICES OF THE CENTRE

Loyola Campus
7306 Sherbrooke Street West
Montreal, Quebec
Tel: 482-0320 loc. 700.

Sir George Williams Campus
2170 Bishop Street
Montreal, Quebec
Tel: 879-2865

The Centre for Continuing Education is currently developing and administering courses which fall under one of the two general categories: off-campus university credit programmes and non-credit programmes.

20.1.1 OFF-CAMPUS UNIVERSITY CREDIT PROGRAMMES

University credit courses are offered off-campus during the winter and summer sessions. Students who take their courses through Continuing Education will receive their credits according to the regular university programmes in which they are enrolled.

The purpose of this programme is to attempt to meet the needs of various segments of the public by offering courses in more convenient locations. Continuing Education is prepared to offer courses from the university programmes wherever there is a sufficient demand, provided qualified lecturers are available.

Individuals interested in establishing off-campus courses in their areas should contact the Coordinator of Teacher Training and Certification of Concordia University, Sir George Williams Campus, at 1455 de Maisonneuve Blvd. West, Montreal, Quebec H3G 1M8.

Admission

Admission to credit work through Continuing Education is the same as for regular admission to the university undergraduate programmes. For details refer to the section on Admission Regulations, §13. The courses offered through Continuing Education are oriented towards those individuals who wish to improve their qualifications. A specific effort has been made by Concordia University to meet the needs of teachers seeking courses for "perfectionnement".

20.1.2 NON-CREDIT PROGRAMMES

A wide variety of special programmes and courses is available through the Centre for Continuing Education for individuals who are not necessarily interested in following regular graduate or undergraduate programmes. For most of these, a certificate of achievement will be issued in the name of the Centre to students who successfully complete the required work. Course offerings are reviewed and supplemented frequently to ensure that they satisfy the changing needs for professional development in the community.

21 Programmes of Particular Interest to Teachers

21.1 Introduction

Included in this section is a list of programmes which may be of particular interest to teachers some of which fall outside the offerings of the Department of Education of Concordia University. There are also numerous specific courses which may be of interest to teachers. Potential students are advised to consult each Department.

Continuing Education at 879-8402 is prepared to offer courses off-campus from this section wherever there is sufficient demand, provided suitable lecturers are available.

Teachers who have had problems obtaining scholarity from the Quebec Government for university level courses successfully completed at Concordia University should contact their local Teacher's Association. In the event that further information is required the coordinator of teacher training and certification should be contacted at 879-8402.

21.2 Specific Programmes for the Teaching Sector

(a) Certificate Programmes

(1) Certificate in the Teaching of English as a Second Language, Elementary Option, Secondary Option (30 credits) See §41.6.3

(2) Certificat d'enseignement de l'anglais langue seconde au niveau élémentaire (programme intensif de perfectionnement) (30 credits) See §41.6.2

(3) Certificate in Education (for Practising Teachers) (30 credits) See §41.16.2

(4) Certificate in Mathematics for Teachers (Elementary School Level). (30 credits) See § 91.12.2

(5) Certificate in Mathematics for Teachers (Junior Secondary School Level). (30 credits) See § 91.12.3

NOTE: A certificate programme is one in which the courses offered are at the Bachelor level.

(b) Bachelors Degrees

(1) Bachelor of Arts (Major in Early Childhood Education). (90 credits) See §41.16.1

(2) Bachelor of Education (English as a Second Language). (90 credits) See §41.6.1

(c) Diploma Programmes

(1) Diploma in Early Childhood Education (33 credits) See Diploma Programmes, Graduate Calendar

(2) Diploma in Instructional Technology (33 credits) See Diploma Programmes, Graduate Calendar

(3) Diploma in Institutional Administration (33 credits) See Diploma Programmes, Graduate Calendar

(4) Diploma in the Teaching of Mathematics (33 credits) See Diploma Programmes, Graduate Calendar

(5) Diploma in Art Education (33 credits) See Diploma Programmes, Graduate Calendar

(6) Diploma in Ethics (33 credits) See Diploma Programmes, Graduate Calendar.

NOTE: A Diploma programme is one in which the courses offered are at a level between the Bachelor's and Master's degree.

(d) Master's Degree Programmes

(1) Master in the Teaching of Mathematics (M.T.M.) (45 credits) See Graduate Programmes, etc., Graduate Calendar

(2) Master of Science in Biology (Teaching Option) (45 credits) See Graduate Programmes, Graduate Calendar

(3) Master of Science in Chemistry (Teaching Option) (45 credits) See Graduate Programmes, Graduate Calendar

(4) Master of Science in Physics (Option B) (45 credits) See Graduate Programmes, Graduate Calendar

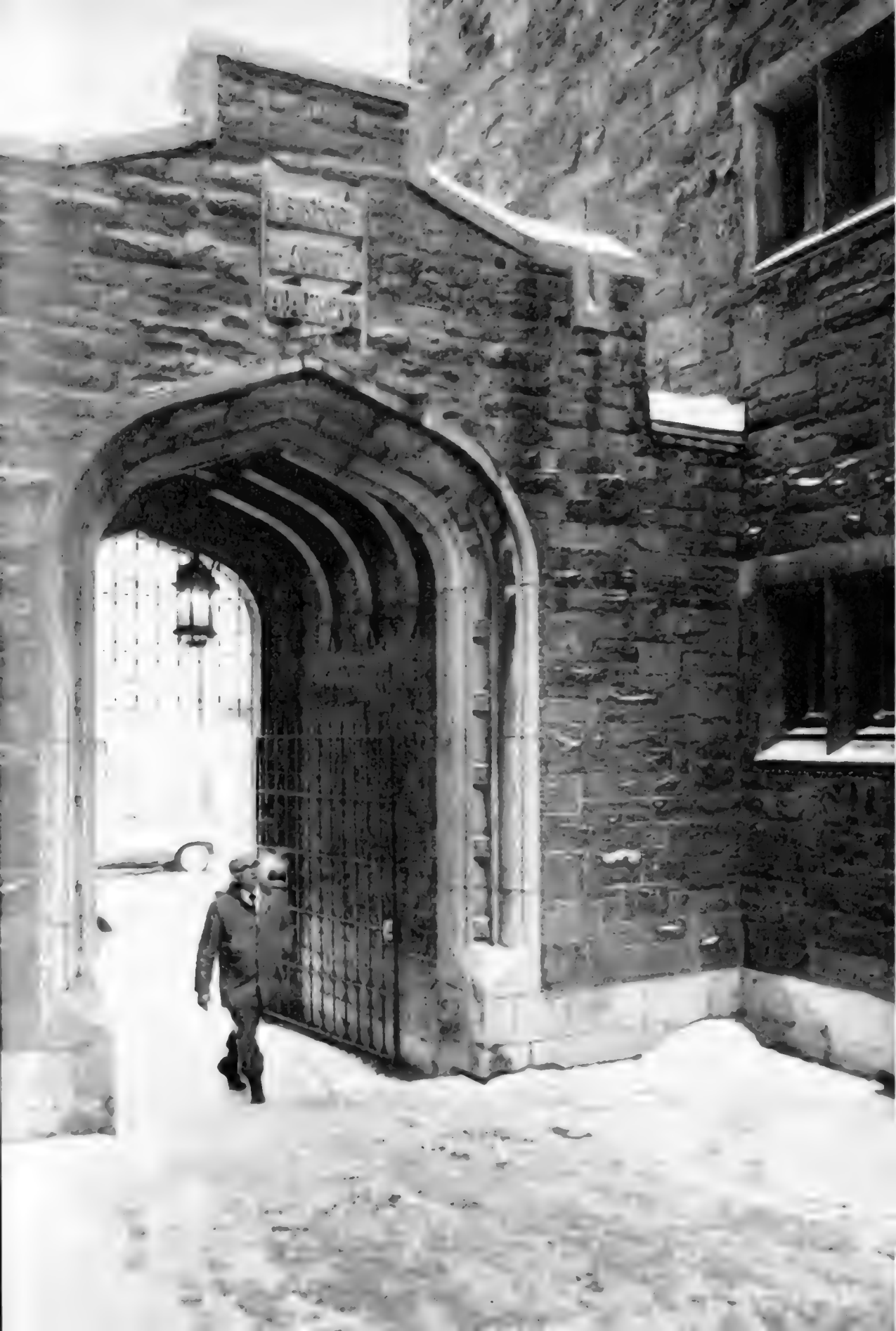
(5) Master of Arts in Art Education (45 credits) See Graduate Programmes, Graduate Calendar

(6) Master of Arts in Applied Linguistics (45 credits) See Graduate Programmes, Graduate Calendar

(7) Master of Fine Arts (90 credits) See Graduate Programmes, Graduate Calendar

(8) Master of Arts in Educational Studies (45 credits) See Graduate Programmes, Graduate Calendar

(9) Master of Arts in Educational Technology (90 credits) See Graduate Programmes, Graduate Calendar



INFORMATION

41 Sir George Williams Faculty of Arts

Table of Contents

41.1 SIR GEORGE WILLIAMS FACULTY OF ARTS
- 41.2 Curriculum for the Degree of Bachelor of Arts
- 41.3 Degree Requirements
- 41.4 Programmes

41.5 THE CENTRE FOR INTERDISCIPLINARY STUDIES
- 41.5.1 The Centre for Interdisciplinary Studies
- 41.5.2 Courses in Interdisciplinary Studies
- 41.5.3 Asian Studies
- 41.5.4 Canadian Studies
- 41.5.5 Science and Human Affairs
- 41.5.6 Russian Studies
- 41.5.7 Urban Studies
- 41.5.8 Women's Studies
- 41.5.9 Undergraduate Scholars Programme

41.6 CENTRE FOR THE TEACHING OF ENGLISH AS A SECOND LANGUAGE
- 41.6.1 Curriculum for the Degree of Bachelor of Education
- 41.6.2 Certificat d'Enseignement de l'Anglais, Langue Seconde
- 41.6.3 Certificate in the Teaching of English as a Second Language

41.7 JOURNALISM

HUMANITIES DIVISION

41.8 DEPARTMENT OF CLASSICS, MODERN LANGUAGES AND LINGUISTICS

41.9 DEPARTMENT OF ENGLISH

41.10 DEPARTMENT OF FRENCH

41.11 MATHEMATICS (FACULTY OF SCIENCE, SGW)

41.12 DEPARTMENT OF PHILOSOPHY

41.13 DEPARTMENT OF RELIGION

SOCIAL SCIENCES DIVISION

41.14 DEPARTMENT OF APPLIED SOCIAL SCIENCE

41.15 DEPARTMENT OF ECONOMICS

41.16 DEPARTMENT OF EDUCATION

41.17 DEPARTMENT OF GEOGRAPHY

41.18 DEPARTMENT OF HISTORY

41.19 DEPARTMENT OF POLITICAL SCIENCE

41.20 DEPARTMENT OF PSYCHOLOGY

41.21 DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY

41.1 Sir George Williams Faculty of Arts

Dean
IAN L. CAMPBELL

Associate Dean (Priorities)
MURIEL ARMSTRONG

Associate Dean (Curriculum)
DAVID McKEEN

Assistant Dean (Students)
BRIAN SLACK

Assistant to the Dean
MONA OSBORNE

41.2 Curriculum for the Degree of Bachelor of Arts

Admission Requirements

General admission requirements are listed in § 13.

Specific requirements for admission to the various programmes leading to the degree of Bachelor of Arts are listed below. Students lacking one or more of these prerequisites may be admitted, but must include the designated prerequisite courses among the courses followed in their undergraduate programmes.

Programme titles refer to honours, specializations, majors and minor components where these exist.

Bachelor of Arts

NOTE: One full course represents two term courses.

Applied Social Science Geography	One full course in Mathematics at the Collegial level or the equivalent.
Psychology	One full course in Mathematics and Biology 001 (CEGEP 301 or 921) and Psychology 011 (CEGEP 101 and 201).
Mathematics Applied Mathematics	Mathematics 003, 004, 005 (CEGEP 103, 105, 203).
Asian Studies Canadian Politics Canadian Studies Early Childhood Education Economics Education (Minor) English French French/Translation German Greek Hebrew History International Affairs Italian Journalism Judaic Studies Latin Linguistics Philosophy Political Philosophy Political Science Religion Russian Russian Studies Science and Human Affairs Social Welfare Sociology and Anthropology Spanish Urban Studies Women's Studies	No requirement besides the Diploma for Collegial Studies

Bachelor of Education See § 41.6.1

The designation "minor in . . .," "major in . . .," "specialization in . . ." or "honours in . . ." will be given to candidates for

the degree of Bachelor of Arts whose programmes meet both the requirements of the Sir George Williams Faculty of Arts for a minor, major, specialization or honours programme, and the departmental requirements for such a programme in the particular discipline. Students should therefore consult the statement of the Faculty's degree requirements contained in the next section of this calendar, and should also consult the programme requirements of the departments, which are set out within the sections devoted to the various faculties.

NOTE: Quebec universities have agreed to admit to the appropriate undergraduate programme any collegial student successfully completing one of the above programmes provided of course that resources are sufficient. When all such qualified students have been admitted, the university reserves the right to admit students who may not have all the specified prerequisites according to its own criteria.

41.3 Degree Requirements

Definition of Credit

Up to and including the academic year 1973-74, degree programmes have been expressed in terms of courses, with one credit being applied to a "full course" (normally two terms) and one half-credit being applied to a "half-course" (normally one term).

Starting in 1974-75, in accordance with the recommendations of the Quebec Council of Universities, the credit-base was modified to take into account the total activity of the student. Students preparing for the degree of Bachelor of Arts take a minimum of 90 credits. Each credit represents, for the average student, a minimum of 45 hours spread across lectures, conferences, laboratories, studio or practice-periods, tests, examinations and personal work.

Graduation with the degree of Bachelor of Arts requires:

1. Successful completion of a programme of concentration in the form of a specialization, a double minor, a major or an honours programme as listed below.
2. A maximum of 48 credits at the 200-level out of the 90 credits required for the degree.
3. Students taking a double minor, an interdisciplinary major, a departmental major, a specialization, or a departmental honours may take no more than 66 of their 90 course-credits in one department, and no more than 78 in one division (i.e. Humanities Division or Social Sciences Division).
4. Students taking an interdisciplinary honours programme or a combined honours programme must take at least 18 course-credits outside of their division, and outside of their departments of concentration if the respective departments are in different divisions.

Concentration Requirement

Since the CEGEP programme is designed to give all students the opportunity to explore different fields and thus acquire a broad general basis for further study, the undergraduate programme in Arts requires some degree of concentration, according to the interests and capacities of the student. The four main forms of concentration are the minor, the major, the specialization, all of which require that the student be successful in a prescribed pattern of courses, and honours, which involves not only a greater degree of concentration, but also a high level of academic performance.

In order to graduate, therefore, a student must have completed one of the following types of programmes: a double minor; an interdisciplinary major programme; a departmental major programme; a specialization; a combined honours programme; an interdisciplinary honours programme; a departmental honours programme.

Prior to registration, students will be required to select one of the types of programmes outlined above. In the case of honours, students will register upon entry in an honours *programme;* but their acceptance as honours students will depend on their performance during their first year. Students failing to meet requirements for honours standing will proceed as majors. The requirements of selecting upon entry a programme of concentration should not be thought of as being necessarily a final commitment. The Arts programme is designed to be flexible enough to allow for changes of orientation, subject, of course, to limitations in the case of certain programmes in great demand.

41.4 Programmes

Honours, Specializations, Majors and Minors are listed with their respective Departments.

Programme Advisers

Anthropology
C. BRANT

Applied Mathematics (Optimization)
M. MALIK
J. SENEZ

Applied Social Science
R. McDONALD

Asian Studies
J. HILL

Canadian Politics
B. WILLIAMS

Canadian Studies
R. WILBUR

Comparative Political Studies
B. WILLIAMS

Economics
A. ANASTASOPOULOS
J. BRESLAW
M. STELCNER

Early Childhood Education
D. WHITE

Education
M. FARRELL
W. KNITTER

English
E. RONQUIST

French
A. JORDAN

French/English Translation
A. JORDAN

Geography
S. AIKEN
H. CLINCH

German
A. KETTER

Greek
P. WIDDOWS

Hebrew
J. MACALUSO

History
I. SMITH

Indo-European Linguistics
C. BARTON

International Affairs
P. ARNOPOULOS

Italian
J. MACALUSO

Journalism
D. OANCIA

Judaic Studies
M. OPPENHEIM

Latin
P. WIDDOWS

Linguistics
C. BARTON

Mathematics
M. MALIK
H. PROPPE
J. SENEZ

Philosophy
S. MULLETT
J. ORNSTEIN

Political Science
B. WILLIAMS

Political Philosophy
S. SHELL

Psychology
D. ANDRES
G. BRETON
A. DOYLE

Religion
M. OPPENHEIM

Russian
A. SIDOROW

Russian Studies
I. SMITH

Science and Human Affairs
G. BINDON

Social Welfare
R. McDONALD

Sociology
J. JACKSON
K. JONASSOHN
A. SYNNOTT

Spanish
J. GRAYSON

Statistics
M. MALIK
H. PROPPE
J. SENEZ

TESL
G. NEWSHAM

Undergraduate Scholars Programme
M. VERTHUY

Urban Studies
A. MELAMED

Women's Studies
C. ALLEN

Majors Programmes

A "major" is an approved *sequence* of courses. It includes a minimum of 42 credits and a maximum of 60. The concentration may include certain approved courses in other closely related fields. The term "major" as used by Concordia University implies that the student has followed, within the requirements for the degree, a planned programme in a specialized field.

Honours Programmes

The university has approved programmes leading to an honours degree in certain selected fields. An honours degree indicates specialization within a field, and high academic standing. In order to qualify for an honours degree a student must meet all of the academic qualifications and comply with the regulations set forth below.

1. A candidate for an honours degree should indicate such intention at registration and consult the honours representative of the department(s) concerned as soon as possible. Acceptance as an honours student will depend on performance during the first year. The honours standing will be reviewed annually.

   A student who has followed the courses prescribed for the honours programme

and has met all the requirements may enter the programme with the approval of the honours representative any time before beginning the final 30 credits. No retroactive approval of entry may be made.

2. A student who enters with advanced standing may apply pro tanto credits which are applicable to the honours degree requirements, upon approval by the department(s).
   A transfer student must complete a minimum of 30 credits in the basic honours programme in residence to receive a degree with honours.
3. An honours student must maintain a 'B' average with no grade lower than 'C' in all courses in the basic honours programme.
   An honours student must meet the general degree requirements as well as the specific requirements for an honours degree, and must obtain at least a 'C' average over the total degree programme. Failure in any course will mean suspension or withdrawal from the honours programme. Students who fail to meet acceptance requirements and who are required to withdraw from the honours programme will proceed as majors. Reinstatement into the honours programme is possible only by recommendation by the honours representative.
4. A student shall be allowed to qualify for only one honours degree in either a single or combined honours programme.
5. A degree with honours in any programme is granted upon graduation only with the approval of the Senate.

Honours Committee

B. SLACK, *Associate Professor (Chairman)*
A. B. DOYLE, *Associate Professor*
E. PECHTER, *Associate Professor*
S. MULLETT, *Assistant Professor*
C. FOSTER, *For the Registar*
M. OSBORNE, *Secretary*

Departmental Honours Representatives

Economics
MORTON STELCNER, *Associate Professor of Economics*

Education
WILLIAM KNITTER, *Assistant Professor of Education*

English
E. RONQUIST, *Assistant Professor of English*

French
ALBERT JORDAN, *Associate Professor of French*

Geography
HARRY CLINCH, *Associate Professor of Geography*

History
IRVING SMITH, *Associate Professor of History and Russian Studies*

Mathematics
M. MALIK, *Associate Professor of Mathematics*

Philosophy
SHEILA MULLETT, *Assistant Professor of Philosophy*

Political Science
BLAIR WILLIAMS, *Associate Professor of Political Science*

Psychology
ED BRUSSELL, *Assistant Professor of Psychology*

Religion
MICHAEL OPPENHEIM, *Assistant Professor of Religion*

Russian Studies
IRVING SMITH, *Associate Professor of History and Russian Studies*

Sociology and Anthropology
CHARLES BRANT, *Professor of Sociology and Anthropology*

JOHN JACKSON, *Associate Professor of Sociology*

Undergraduate Scholars Programme
MAIR VERTHUY, *Associate Professor of French and Coordinator of Undergraduate Scholars Programme*

Urban Studies
A. MELAMED, *Assistant Professor in the Centre for Interdisciplinary Studies and Coordinator of Urban Studies*

41.5 Centre for Interdisciplinary Studies

Associate Professor of Physics and Director of the Centre for Interdisciplinary Studies
DAVID CHARLTON

Professor of Science and Human Affairs
FRED KNELMAN

Professor of History and Coordinator of Canadian Studies
RICHARD WILBUR

Associate Professor of Philosophy and Coordinator of Women's Studies
CHRISTINE ALLEN

Associate Professor of History and Science and Human Affairs
WADE CHAMBERS

Associate Professor of History and Coordinator of Asian Studies
JOHN HILL

Associate Professor of History and Coordinator of Russian Studies
IRVING SMITH

Associate Professor of English and Canadian Studies
ROBERT SORFLEET

Associate Professor of French and Coordinator of the Undergraduate Scholars Programme
MAIR VERTHUY

Visiting Assistant Professor and Coordinator of Science and Human Affairs
GEORGE BINDON

Assistant Professor in the Centre for Interdisciplinary Studies and Coordinator of Urban Studies
ANSHEL MELAMED

Adjunct Professor of Science and Human Affairs
CHRISTIAN de LAET

41.5.1 THE CENTRE FOR INTERDISCIPLINARY STUDIES

The Centre for Interdisciplinary Studies offers a variety of interdisciplinary programmes. Each programme allows a student to study in a number of disciplines and relate these to the study of a complex area or problem. The area programmes include Canada, Russia and Asia. The programmes that confront issues are Science and Human Affairs, Urban Studies, and Women's Studies. The Centre also offers an Undergraduate Scholars Programme which encourages promising students to develop an individual programme of study in consultation with a faculty adviser.

All Interdisciplinary Studies courses, as well as some other courses offered within the Centre for Interdisciplinary Studies, may be regarded as courses in the Humanities or in the Social Sciences.

41.5.2 COURSES IN INTERDISCIPLINARY STUDIES

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1.

INTERDISCIPLINARY STUDIES — GEOGRAPHY S212
Early Man

An examination of the scientific evidence for the unwritten part of man's evolutionary history. The course will study both food-gathering and food-producing man. Biological and cultural evolution will be considered from both a temporal and a spatial viewpoint against a background of changing natural environment. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Science and Human Affairs Programme.

INTERDISCIPLINARY STUDIES PHILOSOPHY S281
Introduction to General Systems Theory

An elementary survey of the trans-disciplinary general systems approach. Such basic concepts as structure, information and regulation will be explored and a teleological framework suited to the social and behavioral sciences will be developed. (6 credits) *NOTE A/See § 200.1*

INTERDISCIPLINARY STUDIES S300
Faculty of Arts Lecture Series

This course provides a flexible context for study in a field of immediate or specific interest. The theme or topic discussed will vary from year to year. (3 credits) *NOTE A/See § 200.1*

INTERDISCIPLINARY STUDIES — ANTHROPOLOGY S333
Introduction to Archaeology
An introduction to the archaeology of the ancient civilizations of the Mediterranean world. Special emphasis will be given to the methodological approach to archaeology (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Science and Human Affairs Programme.

41.5.3 ASIAN STUDIES

As Canada strengthens her relationships with the nations of Asia, she will need young men and women who have been trained in Asian Studies to provide leadership in such fields as education, foreign service, banking, international law, overseas industry and business. The Asian Studies Programme seeks to meet this need by offering an interdisciplinary course of study involving the departments of Economics, History, Political Science, Religion and Sociology-Anthropology and the Faculty of Fine Arts.

Asian Studies Committee
JOHN HILL, *History, Coordinator*
LALITA SINGH, *Political Science*
CHARLES BRANT, *Sociology-Anthropology*
PHILIP COHEN, *Fine Arts (Music)*
SHEILA McDONOUGH, *Religion*
DAVID MILLER, *Religion*
SHREEKANT PALEKAR, *Economics*
MARTIN SINGER, *History*

Programmes
Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 41.3

The superscript indicates credit value.

60 BA Major in Asian Studies

6 Asian St S495[6]
6 Hist S261[6]
6 Pol Sc S355[6]
6 Chosen from Rel S311[6], S312[6], S313[6]
6 Chosen from Anth S464[3], S465[3], S466[3], S467[3]
18 Chosen from Arabic S411[6]; Econ S440[6]; Hist S361[6], S362[6], S363[6], S461[6]; World Music C310[6]; Pol Sc S485[6]; Rel S311[6], S312[6], S313[6]
12 Chosen from Asian content Elective credits (in consultation with Asian St Major Adviser)

30 Minor in East Asian Studies

12 Chosen from Hist S261[6], Asian St S495[6] or any other Asian St course approved by the Coordinator of Asian St
18 Chosen from Hist S362[6], S363[6], S461[6], Rel S312[6], World Music C310[6], Pol Sc S355[6], Anth S466[3]
NOTE: Students may take no more than 12 of these credits in a single department.

30 Minor in South Asian Studies

12 Chosen from Hist S261[6], Asian St S495[6] or any other Asian St course approved by the Coordinator of Asian St
18 Chosen from Hist S361[6], S461[6], Rel S311[6], S313[6], World Music C310[6], Pol Sc S355[6], Anth S464[3], S467[3]
NOTE: Students may take no more than 12 of these credits in a single department.

COURSES IN ASIAN STUDIES

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1.

ASIAN STUDIES
ASIAN STUDIES S295
Introduction to an Asian Language
Prerequisite: Enrolment in the Asian Studies major or minor programmes or permission of the Coordinator of Asian Studies. This course allows individual or group instruction in the basic vocabulary and grammar of an approved Asian Language with a qualified instructor approved by the Coordinator and the Department of Modern Languages. Students should understand that fees will vary with individual instructors and the mode of instruction. (6 credits) *NOTE A/See § 200.1*

ASIAN STUDIES S395
Study of an Asian Language
Prerequisite: Asian Studies S295 or permission of the Coordinator of Asian Studies. This course allows individual or group instruction at an intermediate level in an approved Asian Language with a qualified instructor approved by the Coordinator and the Department of Modern Languages. Students should understand that fees will vary with individual instructors and the mode of instruction. (6 credits) *NOTE A/See § 200.1*

ASIAN STUDIES S495
Seminar in Asian Studies
Prerequisite: Permission of the Coordinator. A seminar designed for majors in Asian Studies. The seminar will vary in content depending upon the interests of the majors taking the course. (6 credits) *NOTE A/See § 200.1*

NOTE: With the permission of the Coordinator, a student may take this course twice for credits, provided that a different subject is dealt with the second. He will register the second time under Interdisciplinary Studies S496.

ASIAN STUDIES S496
Seminar in Asian Studies

Prerequisite: Permission of the Coordinator. A student repeating Asian Studies S495 registers for credits under Asian Studies S496. (6 credits) NOTE A/See § 200.1

CLASSICS, MODERN LANGUAGES AND LINGUISTICS

ARABIC S411
Literary Arabic

Prerequisite: Linguistics S221 or permission of the instructor. This course is designed to give the student in one year a thorough understanding of modern literary Arabic through a linguistic analysis of its structure. (6 credits) *NOTE A; B/See § 200.1*

ECONOMICS

ECONOMICS S440
Economic Development

Prerequisites: Economics S209 and S210, S311. The course investigates comparative economic development with special attention to problems of capital formation, population growth, quality of the labour force, and social and cultural attitudes towards economic modernization. Theories of economic development are evaluated in the context of the realities of historical patterns and the varying degrees of ability to achieve modernization. (6 credits) *NOTE A/See § 200.1*

FACULTY OF FINE ARTS

WORLD MUSIC C310
Music in the Non-Western World

Prerequisite: Permission of the Music Section. A survey of the art, religious and folk music of non-European cultures. The study includes an examination of cross-cultural parallels and influences, instruments, notations, textures, techniques of performance and problems of interpretation. Illustrated with recordings and slides. (6 credits) *NOTE A/See § 200.3*

HISTORY

HISTORY S261
History of Asia

A survey of the major intellectual traditions, social structures and political institutions of South and East Asia, with particular attention to the changes in the societies of India and China during the past two centuries. (6 credits) *NOTE A/See § 200.1*

HISTORY S361
History of Modern India

Prerequisite: History S210 or S261 or permission of the Department. A study of India, Pakistan and Bangladesh. The legacy of divergent cultural, linguistic and political experiences, the crisis of colonialism, and the emergence of national imperatives in the 20th century. (6 credits) *NOTE A/See § 200.1*

HISTORY S362
Modern China

Prerequisite: History S210 or S261 or permission of the Department. An intensive study of Chinese history since 1800 with emphasis on problems in political and intellectual history. (6 credits) *NOTE A/See § 200.1*

HISTORY S363
Traditional China

Prerequisite: History S210 or S261 or permission of the Department. An examination of Chinese history from the beginning to the Ch'ing dynasty (c. 1800). Emphasis will be placed on China's political, intellectual and cultural heritage. (6 credits) *NOTE A/See § 200.1*

HISTORY S461
Advanced Study in Asian and African History

Prerequisite: A '300' level course in History or permission of the Department. Seminar in a selected topic in the history of Asia or Africa. The emphasis will be on encouraging students to conduct historical investigation on their own under a professor's guidance. The specific content will vary from year to year depending on the instructor. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE

POLITICAL SCIENCE S355
The Politics of Developing Areas

A study of the politics and structure of government in developing areas such as Asia, Africa or South America against the background of social and economic change since World War II. The specific area which will be studied will vary from year to year depending on the interests of the instructor. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S485
Diplomacy and Foreign Policy

Prerequisite: Political Science S270. Foreign and defence policies of the Great Powers; diplomacy, military strategy and intelligence; methods and techniques of policy-making and enforcement. (6 credits) *NOTE A/See § 200.1*

RELIGION

RELIGION S311
The Religions of India, Ceylon, Southeast Asia

An historical study of the major religious traditions native to the Indian sub-continent, Ceylon and Southeast Asia. Although the course will concentrate upon the development of Hindu and Buddhist religious thought and institutions, consideration will be given to the influence of Jainism, Islam and Christianity upon Hinduism and Theravada Buddhism. The course will end with an analysis of the contemporary religious situation in India and Burma. (6 credits) *NOTE A/See § 200.1*

RELIGION S312
The Religions of China and Japan

Prerequisite: Second year standing. An historical study of the religious traditions of premodern China, Tibet and Japan. After a brief introduction to the origin of Buddhism in India, the course will focus upon the development of religious thought and institutions in Mahayana Buddhism, Taoism, Confucianism and Shinto. The course will end with an analysis of the contemporary religious situations in China and Japan. (6 credits) *NOTE A/See § 200.1*

RELIGION S313
Islam
A study of the rise and development of Islamic religion and culture, with special attention to mysticism and to modernism. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY AND ANTHROPOLOGY

ANTHROPOLOGY S464
Peoples and Cultures of India
Prerequisite: Anthropology S211 or its equivalent. This course will deal with the development of these cultures from their earliest manifestation to the present. Emphasis will be upon the interrelations of techno-economic, social, structural and ideological aspects, with considerable attention to recent and prospective changes. (3 credits) *NOTE A/See § 200.1*

ANTHROPOLOGY S465
Chinese Culture and Society
Prerequisite: Anthropology S211 or its equivalent. This course will deal with the development of these cultures from their earliest manifestation to the present. Emphasis will be upon the interrelations of techno-economic, social, structural and ideological aspects, with considerable attention to recent and prospective changes. (3 credits) *NOTE A/See § 200.01*

ANTHROPOLOGY S466
Peoples and Cultures of Japan and Korea
Prerequisite: Anthropology S211 or its equivalent. This course will deal with the development of these cultures from their earliest manifestation to the present. Emphasis will be upon the interrelations of techno-economic, social, structural and ideological aspects, with considerable attention to recent and prospective changes. (3 credits) *NOTE A/See § 200.1*

ANTHROPOLOGY S467
Peoples and Cultures of Southeast Asia
Prerequisite: Anthropology S211 or its equivalent. This course will deal with the development of these cultures from their earliest manifestation to the present. Emphasis will be upon the interrelations of techno-economic, social, structural and ideological aspects, with considerable attention to recent and prospective changes. (3 credits) *NOTE A/See § 200.1*

41.5.4 CANADIAN STUDIES

The Canadian Studies Programme is designed to introduce the student to a number of disciplines as they apply to Canada. It provides the opportunity to obtain a liberal arts education given direction and depth by a focus on Canada. After completing the introductory core of courses, the student develops a proposal for an interdisciplinary research project and then in consultation with the Coordinator plans a programme of studies relevant to it. The research project is completed under the supervision of an adviser and is formally reported in the Canadian Studies Seminar.

Canadian Studies Committee

RICHARD WILBUR, *History, Coordinator*
HARRY ANGELL, *Politcal Science*
ROBIN BURNS, *History*
HARRY CLINCH, *Geography*
BARBARA OPALA, *English*
SANDRA PAIKOWSKY, *Fine Arts*
ROBERT SORFLEET, *English*
ANTHONY SYNNOTT, *Sociology*
BLAIR WILLIAMS, *Political Science*

Programme

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 41.3

The superscript indicates credit value.

48 BA Major in Canadian Studies

6 Can St S211[6]
6 Engl S244[6]
6 Fr S211[6]
6 Hist S221[6]
6 Can St S411[6]
18 Chosen from Engl S343[6], S344[6], S448[3]; Art Hist C249[6], C444[6]; World Music C300[6], Fr S331[6], S431[6], S432[6], S465[3]; Geog S341[6]; Rel S363[6]; Econ S434[6], S446[3]; Ed S442[3]; Hist S321[6], S322[6], S323[6], S326[6], S421[6]; Pol Sc S330[6], S335[3], S436[3], S437[3]; Soc S445[3], S470[3], S471[6]; Anth S462[6]
NOTE: If students have taken equivalent courses at CEGEP they must substitute courses with suitable Canadian content to add up to 48 credits. Substitutions may be made with permission of the Coordinator.

COURSES IN CANADIAN STUDIES

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1.

CANADIAN STUDIES

CANADIAN STUDIES S211
Introduction to Canadian Studies
Prerequisite: First-year standing Canadian Studies Major, or permission of the Coordinator. An introduction to some of the problems which have been explored by the humanities and social sciences in the study of Canada. The themes will vary from year to year and could cover topics such as the industrialization of Quebec, immigrant and ethnic traditions and the Americanization of Canada. (6 credits) *NOTE A/See § 200.1*

CANADIAN STUDIES S411
Seminar in Canadian Studies

Prerequisite: Registration in the second year of the major in Canadian Studies. This is a seminar course in Canadian Studies which involves participation by interested members of the staff as well as by students in the third year of the major in Canadian Studies. (6 credits) *NOTE A/See § 200.1*

NOTE: With the permission of the Coordinator, a student may take this course twice for credits, provided that a different subject is dealt with the second time. A student repeating Interdisciplinary Studies S411 for credits will register under Interdisciplinary Studies S412.

CANADIAN STUDIES S412
Seminar in Canadian Studies

Prerequisite: Registration in second or third year of the major in Canadian Studies. A student repeating Canadian Studies S411 registers for credits under Canadian Studies S412. (6 credits) *NOTE A/See § 200.1*

ECONOMICS

ECONOMICS S304
Canadian Economic Policy I

Prerequisites: Economics S209 and S210. A study of the effects of government policies on resource allocation with emphasis on Canadian policy problems. Topics will include government regulation of business, agriculture policy, transportation policy, and tariff policy. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S305
Canadian Economic Policy II

Prerequisite: Economics S209 and S210. A study of trade, government stabilization, growth, and welfare policies with emphasis on Canadian policy problems. Topics also include monetary and fiscal policies, policies to encourage growth, and social security policies. (3 credits) *NOTE A/See § 200.1*

NOTE: Students who have credits for Economics N-405, or Economics N-431 before 1969-70 may not take this course for credits.

ECONOMICS S434
Economic History of Canada

Prerequisites: Economics S209 and S210. This course is designed to introduce the student to Canadian economic development from the early period of settlement to the present day. Emphasis will be placed on the economic history of Canada since Confederation. (6 credits) *NOTE A/See § 200.1*

ECONOMICS S446
The Economic Development of Quebec

Prerequisites: Economics S209 and S210. This course will review past and present trends in the economic development of Quebec, though emphasis will be placed on the economic growth of Quebec since the Second World War. Attention will be given to the regional aspects of its growth problems. (3 credits) *NOTE A/See § 200.1*

EDUCATION

EDUCATION S442
Education in Canada

Prerequisite: 6 credits in Canadian History. It is advisable that students have a reading knowledge of French. This course will study the history of Canadian education and, more particularly, the history of education in Quebec. (3 credits) *NOTE A/See § 200.1*

ENGLISH

ENGLISH S244
Canadian Literature

An introductory survey of Canadian prose and poetry written in or translated into English, from their origins to the present. (6 credits) *NOTE A/See § 200.1*

ENGLISH S343
Canadian Literature
from the 1820's to the 1930's

Prerequisite: Second-year standing. A study of prose, poetry and drama, principally written in English, including such writers as McCulloch, Haliburton, Moodie, DeMille, Kirby, Lampman, Roberts, Pratt, Grove and Stead. (6 credits) *NOTE A/See § 200.1*

ENGLISH S344
Modern Canadian Literature

Prerequisite: English S244. A study of prose, poetry and drama, principally written in English, from the 1930's to the present, including such writers as Laurence, MacLennan, Richler, Lowry, Klein, Callaghan, Layton, Livesay, Birney, Avison, Reaney, Nowlan and Ryga. (6 credits) *NOTE A/See § 200.1*

ENGLISH S448
Special Studies in Canadian Literature

Prerequisite: One of English S343, S344. An intensive study of a limited aspect of Canadian literature which may deal, from year to year, with an individual author or work, or a particular problem, such as "Regionalism and the Diction of Canadian Poetry", "Prairie Fiction" or "Canadian Drama". (3 credits) *NOTE A, C/See § 200.1*

ENGLISH S449
Special Studies in Canadian Literature

A student repeating English S448 for credits registers under English S449. (3 credits) *NOTE A/See § 200.1*

FACULTY OF FINE ARTS

ART HISTORY C249
Canadian Sculpture and Architecture

A study of the more important developments of Canadian architecture and sculpture from indigenous forms to contemporary work. (6 credits). *NOTE A/See § 200.3*

ART HISTORY C444
The Arts in Canada

Prerequisite: Art History C240 or enrolment in the Canadian Studies Major. A history of the arts in Canada from the 17th century to the present day. Where relevant, special attention will be given to those European and American influences which have shaped its growth. (6 credits) *NOTE A/See § 200.1*

WORLD MUSIC C300
Folk Music of the Americas

Prerequisite: Permission of the Music Section. A survey of the roots and development of

traditional music in the New World. The study examines aboriginal as well as transplanted and hybrid styles; urban and rural musics with special attention to European and African antecedents; the relationship of folk musics to popular and cultivated styles; transcription and arrangement, ethno-musicological method. (6 credits) *NOTE A/See § 200.3*

FRENCH

FRANÇAIS S211
Langue II et composition élémentaire

Préalable: Français S201 ou quatre ans de cours de français à l'école secondaire ou équivalent ou l'autorisation du département. Ce cours, destiné aux étudiants ayant déjà une certaine préparation en français oral et écrit qui désirent parfaire leurs connaissances pratiques de la langue, comporte une étude intensive des structures au laboratoire, de nombreux devoirs écrits et l'analyse de certains textes français et québécois. La structure et le contenu du cours sont les mêmes pour toutes les sections, mais le choix des romans étudiés dépend de chaque professeur. (6 crédits) *NOTE A, B/See § 200.1*

FRANÇAIS S331
Littérature et culture québécoises

Préalable: Français S211 ou 211. Ce cours offre un aperçu général de l'histoire — politique, économique, sociale et culturelle — du Québec, toile de fond de la production littéraire; il analyse les courants nouveaux nés du processus de décolonisation et leurs reflets dans l'expression littéraire. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S431
Le roman québécois contemporain

Préalable: Français S331. Etude des romanciers les plus importants du Québec: Aquin, Bessette, Blais, Ducharme, Hébert, Langevin, Roy; leur vision du monde; leur manière de se rattacher aux courants littéraires de notre époque; leurs conceptions littéraires. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S432
La poésie québécoise contemporaine

Préalable: Français S331. Etude des poètes les plus importants du Québec: Chamberland, Duguay, Hébert, Giguère, Godin, Grandbois, Lasnier, Miron, Nelligan, Saint-Denys-Garneau; leurs thèmes; leur vision du monde. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S465
Théâtre québécois

Préalable: Français S331. Etude du théâtre québécois à partir de 1945. Analyse des pièces les plus importantes pour en dégager les lignes de force et établir leurs relations avec le contexte social du Québec contemporain. (3 crédits) *NOTE A/See § 200.1*

GEOGRAPHY

GEOGRAPHY S341
Regional Geography of Canada

Prerequisite: Geography S211 or S271 or second-year standing in an honours or departmental major programme in the Social Sciences or the Faculty of Commerce.

A study of Canada, past and present, based on the various natural regions into which the country is divided. In the first half of the course an historic-geographical approach will be taken to bring to the student's attention the main trends in Canadian cultural and historical development from aboriginal times to the present. The changing nature of man-land relationships at different periods of time, and under different forms of occupance, will receive particular attention. In the second half of the course the present day pattern of human occupance on a regional and national basis will be analysed. (6 credits) *NOTE A/See § 200.1*

GEOGRAPHY S422
Historical and Political Geography of Quebec and Ontario

Prerequisite: Geography S211, S341 or permission of the Department. A study of an historical nature of past geographic patterns, economic, social, cultural and political, in Quebec and Ontario. (6 credits) *NOTE A/See § 200.1*

HISTORY

HISTORY S221
History of canada

A study of the growth of Canada from the age of exploration to the present time. Emphasis is placed on the political, economic and cultural developments which are of significance in the understanding of the problems of today. (6 credits) *NOTE A/See § 200.1*

HISTORY S321
British North America: 1760-1873

Prerequisite: History S210 or S221. An advanced study of the history of British North America from the British conquest and American Revolution to Confederation. The course will focus on historical topics and problems of interpretation, organized according to the regions of British North America. (6 credits)

HISTORY S322
Modern Canada: 1840 to the Present

Prerequisite: History S210 or S221. An intensive study of the political, economic and cultural development of Canada since the Act of Union. (6 credits) *NOTE A/See § 200.1*

HISTORY S323
French Canada to 1763

Prerequisite: History S210 or S221. An intensive study of Canada during the colonial regime. Much of the material will be in French. (6 credits) *NOTE A/See § 200.1*

HISTORY S325
French Canada: 1763-1867

Prerequisite: History S210 or S221. An intensive study of French Canada from the Conquest to Confederation. Much of the material will be in French. (6 credits) *NOTE A/See § 200.1*

HISTORY S326
Quebec: 1867 to the Present

Prerequisite: History S210 or S221 previously or concurrently. An intensive study of Quebec since Confederation. While due attention will be paid to the political history of Quebec, the purpose of the course is to provide a study of

the social, economic and cultural institutions of Quebec. (6 credits) *NOTE A/See § 200.1*

HISTORY S421
Advanced Study in Canadian History

Prerequisite: A '300' level course in History or permission of the Department. Seminar in a selected topic in the history of Canada. The emphasis will be on encouraging students to conduct historical investigation on their own under a professor's guidance. The specific content will vary from year to year depending on the instructor. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE

POLITICAL SCIENCE S330
Government and Politics of Canada

A study of the parliamentary system in Canada with emphasis placed upon the development and judicial interpretation of the British North America Act, the federal system, the nature and organization of political parties, the evolution of cabinet rule, the judicial structure and contemporary problems in Canada. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S335
Quebec Politics

Prerequisite: Political Science S330. A study of the changing party structure and political issues in Quebec and their relationship to constitutional, cultural and economic factors. Some of the reading material will be in French. (3 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S436
Canadian Federalism

Prerequisite: Political Science S330. A critical and analytical study of the theory of federal government and its application to the nature, principles and techniques of federalism in Canada. The reaction of the Canadian federal system to the demands of cultural dualism and regional pressures. Some attention will also be given to the problems of provincial governments in their pressure on and adjustment to Dominion-Provincial relations. (3 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S437
Canadian External Affairs

Prerequisite: Political Science S270 or S330 or History S337. This course will study Canada's position in the world. The presentation will include an outline of the diplomatic history of Canada, as well as an analysis of its foreign and defence policies. Emphasis will be given to the decision-making process by which policy is formulated and executed, with particular reference to Canadian relations vis-à-vis the Americans; the Commonwealth; and the United Nations. (3 credits) *NOTE A/See § 200.1*

RELIGION

RELIGION S363
Religion in Canada

The historical development of the major religious traditions in Canada, their influence on the social, political and cultural areas of Canadian life and their contemporary significance. Attention will also focus on the interaction of Catholic, Protestant, Jewish, Indian and Eskimo groups. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY AND ANTHROPOLOGY

SOCIOLOGY S445
Intergroup Relations in Canada

Prerequisites: Sociology S444. Within the theoretical framework of intergroup relations ethnic groups in Canada will be examined. The groups will include Indians, Inuit, Blacks, Jews, and English and French speakers. The mosaic theory of Canadian ethnic relations will be considered. (3 credits) *NOTE A/See § 200.1*

SOCIOLOGY S470
Canadian Social Structure

Prerequisite: Sociology S210. This course will focus on institutional patterns, with particular attention to the system of social stratification and industrial organization. Elements of differential structure, with special reference to Quebec society will be interpreted a) from the historical perspective of modernizing development, and b) within the context of the North American system. (3 credits) *NOTE A/See § 200.1*

SOCIOLOGY S471
Quebec Society

Prerequisite: Second-year standing. The course focuses on the nature of traditional society and the social forces within Quebec society since the Second World War. It will examine conflicting historical views on Quebec that are relevant to contemporary issues; the consequences of the conquest; the nature of Confederation; and the nature of nationalism and the nation state. Special attention is paid to the language issue, both federally and within Quebec. (6 credits) *NOTE A/See § 200.1*

ANTHROPOLOGY S462
Native Societies and Cultures of North America

Prerequisite: Anthropology S211 or Sociology S210. The principles of general anthropology applied in a survey course on the American Indians. The advent of man to America, including Inuit; brief survey of Indian civilizations; present-day problems of
Canadian and U.S. Indians and Inuit. (6 credits) *NOTE A/See § 200.1*

41.5.5 SCIENCE AND HUMAN AFFAIRS

This programme is concerned with the social dimensions of science and technology. Its teaching and research provide an interdisciplinary examination of the ethical, cultural, political and environmental problems associated with scientific and technological change. Attention is also focused on analysis of the social systems of science from historical, sociological, economic and philosophical perspectives.

The programme is designed for students interested in science and technology, but

who do not plan careers in scientific research or the technical professions. Rather it prepares them for constructive careers which involve a grasp of scientific methods, an understanding of scientific principles, and an appreciation of the nature, content and implications of scientific research, technological innovation and industrial development. For students working toward degrees in science or engineering, the programme provides the opportunity to develop important additional perspectives and capabilities.

There are a number of streams or areas within the programme. In the History and Philosophy of Science, for example, students may concentrate so as to prepare themselves for graduate work. Another stream examines the social impact of science and technology by focusing on policy problems. Students may develop a variety of approaches for dealing with public policy in either the areas of science and technology or environment. These also are preparatory for existing graduate programmes.

In addition to courses in Science and Human Affairs, Concordia offers related courses in many other departments, A major and minor in Environmental Biology, Social Aspects of Engineering courses in the faculty of Engineering and a minor in Social Responsibility of Science on the Loyola Campus.

Science and Human Affairs Committee

GEORGE BINDON, *Science and Human Affairs, Coordinator*
DAVID WADE CHAMBERS, *History/Science and Human Affairs*
DAVID CHARLTON, *Physics*
JEFFREY CRELINSTEN, *Social Responsibility in Science (Loyola)*
GORDON EDWARD, *Science and Human Affairs*
HORST HUTTER, *Political Science*
EDWARD KERRIGAN, *Science and Human Affairs*
FREDERICK KNELMAN, *Science and Human Affairs*
CHRISTIAN de LAET, *Science and Human Affairs*
HUGH McQUEEN, *Engineering*

Programmes

Students are responsibile for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 41.3

The superscript indicates credit value.

60 Specialization in Science and Human Affairs

12 SCHA S201[3], S202[3], S221[3], S222[3]
6 Chosen from SCHA S312[6], S351[6] or Sc electives approved by the Department
18 SCHA S401[6], S446[6], S472[6]
18 Chosen from SCHA S447[6], Phil/IDS S281[6], Phil S221[6], S421[6], Rel S433[6], Soc S422[6], Hist S333[6] or Elec approved by the Department.
6 SCHA S493[6]
NOTE: Students may be required by their adviser to take an English writing course at an appropriate level.

42 BA Major in Science and Human Affairs

12 SCHA S201[3], S202[3], S221[3], S222[3]
6 Chosen from SCHA S312[6], S351[6]; Int St S212[6], S333[6], or Sc Elective credits approved by the Centre
18 Chosen from SCHA S401[6], S446[6], S447[6], S472[6]; Phil S281[6], S421[6], S376[3], S421[6]; Rel S443[6]; Soc S422[6]; Hist S333[6], or Elective credits approved by the Centre
6 SCHA S493[6]

30 Minor in Science and Human Affairs

12 SCHA S201[3], S202[3], S221[3], S222[3]
18 Chosen from SCHA S312[6], S351[6], S401[6], S446[6], S447[6], S472[6]

COURSES IN SCIENCE AND HUMAN AFFAIRS

CENTRE FOR INTERDISCIPLINARY STUDIES

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1.

SCIENCE AND HUMAN AFFAIRS S201
Introduction to Science and Human Affairs I

The social and historical context of scientific and technological change. The reciprocal interactions of science with government, ideology, economic development, religion, literature and social theory; science and the city; science and the control of human life; science and human liberation; new definitions of scientific responsibility may be considered. (3 credits) *NOTE A/See § 200.1*

SCIENCE AND HUMAN AFFAIRS S202
Introduction to Science and Human Affairs II

A continuation of Science and Human Affairs S201. This course may be taken independently. (3 credits) *NOTE A/See § 200.1*

SCIENCE AND HUMAN AFFAIRS S221
Environmental Issues I

The scientific, social and cultural nature of man's relationship to his environment. Emphasis will be placed on pollution, conservation, population resources and human ecology. (3 credits) *NOTE A/See § 200.1*

SCIENCE AND HUMAN AFFAIRS S222
Environmental Issues II

A continuation of Science and Human Affairs S221. This course may be taken independently. (3 credits) *NOTE A/See § 200.1*

SCIENCE AND HUMAN AFFAIRS S312
Case Histories in Experimental Science

Readings will concentrate on the original scientific texts (e.g. Harvey, Galileo, Newton, Faraday, Pasteur, Crick and Watson). In the laboratory section, students will follow the original experimental procedures which will also be examined in classroom demonstrations on film and videotape. (6 credits) *NOTE A/See § 200.1*

SCIENCE AND HUMAN AFFAIRS S351
Astronomy, Cosmology and the Space Age

The nature of the universe as described in both contemporary and historical astronomical theories; cosmology and its cultural context; the nature of scientific method in astronomy; life on other worlds; the social implications of space flight. (6 credits) *NOTE A/See § 200.1*

SCIENCE AND HUMAN AFFAIRS S401
Advanced Study in Technology and Society

Prerequisites: Science and Human Affairs S201, S202, or permission of the Coordinator. The social role and impact of technology in modern society; alienation in the technological age; the critique of technology; the sources and processes of discovery; invention and innovation; methods of technological assessment and forecasting. (6 credits) *NOTE A/See § 200.1*

SCIENCE AND HUMAN AFFAIRS— HISTORY S446
Advanced Study in the History of Science

Prerequisite: Permission of the Coordinator. Seminar in a selected topic in the History of Science. The emphasis will be on encouraging students to conduct historical investigation on their own under a professor's guidance. The specific content will vary from year to year depending on the instructor. (6 credits) *NOTE A/See § 200.1*

NOTE: With permission of the Coordinator, a student may take this course twice for credits provided that a different subject is dealt with the second time. A student repeating Science and Human Affairs — History S446 will register for Science and Human Affairs — History S447.

SCIENCE AND HUMAN AFFAIRS— HISTORY S447
Advanced Study in the History of Science

Prerequisite: Permission of the Coordinator. A student repeating Science and Human Affairs — History S446 registers for credits under Science and Human Affairs — History S447. (6 credits) *NOTE A/See § 200.1*

SCIENCE AND HUMAN AFFAIRS — POLITICAL SCIENCE S472
Science and Public Policy

Prerequisite: Science and Human Affairs S201, S202, one course in Political Science or permission of the Coordinator or the Department. This course will deal with the relationship between science and government. Particular emphasis is placed on such problems as the role of the scientist in political decision-making, the making of Canadian science policy, the mix of basic, applied and mission-oriented research, the relations of science and the military, the nature of technocracy and the role of science in economically developing nations. (6 credits) *NOTE A/See § 200.1*

SCIENCE AND HUMAN AFFAIRS S493
Seminar in Science and Human Affairs

Prerequisite: Enrolment in Major or Specialization in Science and Human Affairs, or permission of the Coordinator. Taught by all members of staff, this seminar affords an opportunity for intensive examination of an explicitly interdisciplinary theme. (6 credits) *NOTE A/See § 200.1*

NOTE: With permission of the Coordinator, a student may take this course twice for credits provided that a different subject is dealt with the second time. A student repeating Science and Human Affairs S493 for credits will register under Science and Human Affairs S494.

SCIENCE AND HUMAN AFFAIRS S494
Seminar in Science and Human Affairs

Prerequisite: Permission of the Coordinator. A student repeating Science and Human Affairs S493 for credits will register under Science and Human Affairs S494. (6 credits) *NOTE A/See § 200.1*

ECONOMICS

ECONOMICS S304
Canadian Economic Policy I

Prerequisites: Economics S209 and S210. A study of the effects of government policies on resource allocation with emphasis on Canadian policy problems. Topics will include government regulation of business, agriculture policy, transportation policy, and tariff policy. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S305
Canadian Economic Policy II

Prerequisites: Economics S209 and S210. A study of trade, government stabilization, growth, and welfare policies with emphasis on Canadian policy problems. Topics will include monetary and fiscal policies, policies to encourage growth, and social security policies. (3 credits) *NOTE A/See § 200.1*

NOTE: Students who have credits for Economics N-405, or Economics N-431 before 1969-70 may not take this course for credits.

ECONOMICS S307
Economics of the Environment

Prerequisites: Economics S209 and S210. The subject of this course is environmental quality. It proceeds through an analysis of the relationship between the natural environment, economics, and institutions. The objective is to depict the problem of environmental quality as an economic problem whose solution demands major changes in economic, political and legal institution. Attention is also given to policies of collective environmental actions in which the effective management of common property resources will be discussed. The course concludes with a discussion of some broader issues, such as the consistency of improved environmental quality with continued economic and population growth. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S308
Economics of Natural Resources

Prerequisites: Economics S209 and S210. This course focuses on the problems of the finiteness of the natural resources base in Canada and in the world, and on an analysis of the demand for and supply of natural resources and energy. The course also discusses the economic aspects of a selected group of conservation measures (financial incentives, reallocation of property rights, regulation). (3 credits) *NOTE A/See § 200.1*

GEOGRAPHY

GEOGRAPHY—INTERDISCIPLINARY STUDIES S212
Early Man

An examination of the scientific evidence for the unwritten part of man's evolutionary history. The course will study both food-gathering and food-producing man. biological and cultural evolution will be considered from both a temporal and a spatial viewpoint against a background of changing natural environment. (6 credits) *NOTE A/See § 200.1*
NOTE: Students who have taken Geography — Interdisciplinary Studies N-321 may not take this course for credits.

GEOGRAPHY S357
Resource Utilization and Conservation

Prerequisite: Geography S211 or second year standing in an honours or departmental major programme in the Social Sciences or the Faculty of Commerce. The resource concept and concepts of conservation. The regional approach to resource management. Case studies of the problems in developing particular natural resources and of interstate areas of poor economic health, with emphasis on the regional and natural parts of such developments. Special emphasis will be given to Canadian problems and those of selected underdeveloped countries. (6 credits) *NOTE A/See § 200.1*

HISTORY

HISTORY S333
Enlightenment and Revolution. 1640-1848

Prerequisite: History S210. European history in the age of the French Revolution, including a study of the scientific and industrial revolutions. (6 credits) *NOTE A/See § 200.1*

HISTORY S335
Social and Intellectual History of Early Modern Europe

Prerequisite: History S210. A study of change and continuity in European society and culture, 1300-1650. Problems studied include feudal-capitalist relationships, the Italian Renaissance, Northern State Development, Protestant Reformation, Scientific Revolution and European Colonial expansion. Methodological issues will be emphasized. (6 credits) *NOTE A/See § 200.1*

HISTORY S336
Social and Intellectual History of Modern Europe

Prerequisite: History S210. The intellectual systems arising in Europe since the 17th century will be explored in the context of the economic and social circumstances which engendered them. This course will begin with the rise of theories of "posessive individualism" and will end with the contemporary cultural crisis. While attention will be paid to the general dynamics of culture, special attention will be devoted to the social functions of particular ideologies. (6 credits) *NOTE A/See § 200.1*

HISTORY—SCIENCE AND HUMAN AFFAIRS S446
Advanced Study in the History of Science

Prerequisite: Permission of the Department. Seminar in a selected topic in the History of Science. The emphasis will be on encouraging students to conduct historical investigation on their own under a professor's guidance. The specific content will vary from year to year depending on the instructor. (6 credits) *NOTE A, C/See § 200.1*

HISTORY—SCIENCE AND HUMAN AFFAIRS S447
Advanced Study in the History of Science

Prerequisite: Permission of the Department. A student repeating History-Science and Human Affairs S446 registers for credits under History — Science and Human Affairs S447. (6 credits) *NOTE A, C/See § 200.1*

PHILOSOPHY

PHILOSOPHY S221
Introduction to Logic

This course introduces the student to the nature and function of formal logic through an examination of both syllogistic logic and immediate inference. In addition there will be an extensive treatment of informal or material fallacies and an elementary presentation of propositional logic. (6 credits) *NOTE A/See § 200.1*

PHILOSOPHY-INTERDISCIPLINARY STUDIES S281
Introduction to General Systems Theory

An elementary survey of the transdisciplinary general systems approach. Such basic concepts as, structure, information and regulation will be explored and a teleological framework suited to the social and behavioral sciences will be developed. (6 credits) *NOTE A/See § 200.1*

PHILOSOPHY S321
Modern Logic

An introduction to modern logic, its techniques and applications. Coverage of sentential logic, first order predicate logic, naive set theory, relations and functions (6 credits) *NOTE A/See § 200.1*

PHILOSOPHY S376
Philosophy of the Social Sciences

Philosophical examination of the structure and methodology of the social sciences. Special attention to problems of functionalism, teleological explanation and the testing of social theories. (3 credits) *NOTE A/See § 200.1*

PHILOSOPHY S421
The Philosophy of Science

Prerequisite: One course in logic or permission of the Department. A critical examination of problems pertaining to the structure and status of scientific theories and the logic of

scientific inference. Such topics as the following will be discussed: explanation, confirmation, verifiability and falsifiability, problems of definition, observational and theoretical terms, models and analogies. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE

POLITICAL SCIENCE S330
Government and Politics of Canada

A study of the parliamentary system in Canada with emphasis placed upon the development and judicial interpretation of the British North America Act, the federal system, the nature and organization of political parties, the evolution of cabinet rule, the judicial structure and contemporary problems in Canada. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S333
Problems of Public Administration

Prerequisite: Political Science S240 or S330. This course deals with the nature and function of the administrative branch of government. The student is introduced to such problems as the organization of government departments, the management of government corporations, budgeting, selection and training of personnel, maintenance of morale and discipline, relationship between legislature and administration, relationship between the administration and the public. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE—SCIENCE AND HUMAN AFFAIRS S472
Science and Public Policy

Prerequisites: Science and Human Affairs S201, S202, one course in Political Science or permission of the Coordinator of the Department. The relationship between science and government. Particular emphasis is placed on such problems as the role of the scientist in political decision-making, the making of Canadian science policy, the mix of basic, applied and mission-oriented research, the relations of science and the military, the nature of technocracy and the role of science in economically developing nations. (6 credits) *NOTE A/See § 200.1*

RELIGION

RELIGION S443
Modern Religious and Atheistic Thought

A historical and critical review of the conflicting philosophical interpretations of religion that have arisen in the West since the Enlightenment. Special attention will be paid to problems about the nature of meaning of religious experience currently debated between religious and secularist thinkers. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY AND ANTHROPOLOGY

SOCIOLOGY S422
Sociology of Knowledge

Prerequisite: Sociology S210. An examination of the interaction between social structures and meaning and belief systems. Of special concern will be the social influence bearing upon claims to truth and validity and upon definitions of social morality. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY S448
Population and Society

Prerequisite: Sociology S210, or an introductory course in a social science. This course consists of a brief survey of population theory and an introduction to the techniques of population analysis. It will cover the size, distribution, and composition of the population; changes in these characteristics; the relationship between population trends and social and economic conditions, with special reference to recent trends. (3 credits) *NOTE A/See § 200.1*

ANTHROPOLOGY/INTERDISCIPLINARY STUDIES S333
Introduction to Archaeology

An introduction to the archaeology of the ancient civilizations of the Mediterranean world. Special emphasis will be given to the methodological approach to archaeology. (6 credits) *NOTE A/See § 200.1*

41.5.6 RUSSIAN STUDIES

The Russian Studies Major prepares students for professional and academic careers in Civil Service, Trade and Commerce, External Affairs and other areas of relationship between Canada and the Soviet Union. A wide variety of courses in Russian language, politics, economics, history, philosophy and geography is taught by specialists who work closely with students in designing programmes which best fit their needs.

Russian Studies Committee
IRVING SMITH, *History, Coordinator*
TATIANA SIDOROW, *Russian Language*
VLADIMIR ZEMAN, *Philosophy*

Programmes

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 41.3

The superscript indicates credit value.

66 BA Honours in Russian Studies

6 Chosen from Econ S209[3], S210[3], S221[6]; Hist S210[6]
6 Chosen from Econ S464[3], S465[3]
18 Russ S210[6], S241[6], S311[6]
18 Hist S210[6], S341[6], S445[6]
6 Geog S345[6]
12 Chosen from Russ S351[6], S452[6], S453[6], S454[3], S455[3]; Phil S365[6]; Pol Sc S353[6]

**Geog S345[6] may be taken for credits in the programme only when the subject matter is relevant to Russian Studies. A student who*

has already taken it in a year when the subject matter was not thus relevant, registers under Geog S346[6] in meeting the degree requirements.

48 BA Major in Russian Studies

18 Russ S210[6], S241[6], S311[6]
12 Hist S210[6], S341[6]
6 Geog S345[6]*
12 Chosen from Russ S351[6], S452[6], S453[6], S454[3], S455[3]; Econ S464[3], S465[3]; Hist S445[6]; Phil S365[6]; Pol Sc S356[6];

**Geog S345[6] may be taken for credits in the programme only when the subject matter is relevant to Russian Studies. A student who has already taken it in a year when the subject matter was not thus relevant, registers under Geog S346[6] in meeting the degree requirements.*

COURSES IN RUSSIAN STUDIES

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1.

CLASSICS, MODERN LANGUAGES AND LINGUISTICS

RUSSIAN S210
Introductory Course in Russian

A beginners' course in the Russian language which is designed, in one year, to acquaint the student with pronunciation, the main grammatical aspects and a basic vocabulary. Emphasis is placed on speaking, reading and writing Russian. Lectures and laboratory. (6 credits) *NOTE A, B/See § 200.1*

RUSSIAN S241
Intermediate Russian

Prerequisite: Russian S210 or equivalent. This course consists of a complete review of Russian grammar, composition, reading and conversation. Through reading of short stories and additional material, the student is given the opportunity of acquainting himself with Russian culture and literature. (6 credits) *NOTE A, B/See § 200.1*

RUSSIAN S311
Advanced Russian Language and Stylistics

Prerequisite: Russian S241 or permission of the instructor. This course is intended to give increased fluency and a firmer command of the language. The emphasis of the course is on stylistics and composition. Through additional reading students are given the opportunity to acquaint themselves with the various aspects of Russian civilization. Selected texts will be discussed and analysed in Russian. (6 credits) *NOTE A/See § 200.1*

RUSSIAN S351
Introduction to 19th Century Russian Literature through the Short Story

Prerequisite: Russian S241 or equivalent. The short story will be used both as a subject for literary study and as a reflection of the history and social preoccupation of the period. Opportunity will be provided for discussion and some attention will be paid to composition. This course is conducted in Russian. (6 credits) *NOTE A/See § 200.1*

RUSSIAN S452
Soviet Literature

Prerequisite: Russian S241 or equivalent. A general survey of Soviet prose, drama and poetry from 1917 to the present day. The aim of the course is to familiarize the student not only with the literature itself but also with its origins and development. Opportunity will be provided for discussions and some time will be devoted to advanced composition. This course is conducted in Russian. (6 credits) *NOTE A/See § 200.1*

RUSSIAN S453
Russian Drama

Prerequisite: Russian S241 or permission of the instructor. The course traces the development of Russian drama from the end of the 18th century to the present day. Such authors as D. Fonvisin, A. Gribojedov, A. Pushkin, M. Lermontov, N. Gogol, A. Ostrowski, A. Chekhov, A. Tolstoi, M. Gorki, A. Arbusov and V. Majakovskii will be discussed. This course is conducted in Russian. (6 credits) *NOTE A/See § 200.1*

RUSSIAN S454
Study of an Individual Russian Author I

Prerequisite: Russian S241 or equivalent. This course will consist of the detailed study of a Russian author, e.g. L. N. Tolstoy, F. M. Dostojevskii, N. V. Gogol. The chosen author will vary from time to time, in accordance with the needs of the students. (3 credits *NOTE A/See § 200.1*

RUSSIAN S455
Study of an Individual Russian Author II

Prerequisite: Russian S241 or equivalent. This course will consist of the detailed study of a Russian author, e.g. A. S. Pushkin, M. Ju. Lermontov, I. A. Goncharov. The choice of author will vary from time to time, in accordance with the needs of the students. (3 credits) *NOTE A/See § 200.1*

ECONOMICS

ECONOMICS S209
Introduction to Microeconomics

Introduction to the functioning of the market system; concepts of supply and demand; the role of prices in resources allocation; production decisions by firms. Analysis of differences between competition and monopoly and the implications for economic efficiency; theories of labour markets and wage determination. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S210
Introduction to Macroeconomics

An introductory analysis of aggregate economic activity. The focus is on the principles of

determination of the level of employment, national income, real output, inflation, and international balance of payments. The course also analyzes the principles which govern the trade relations among countries. These topics are integrated by a discussion of government monetary and fiscal policies to stablize economic activity. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S221
Introduction to Economic History

This course deals with the development of industrial economics from the Industrial Revolution to the present. Emphasis is on long-term forces such as demographic, technological, and institutional evolution. (6 credits) *NOTE A/See § 200.1*

ECONOMICS S464
Marxian Economics

Prerequisite: Economics S209 and S210. A general survey of Marxian theory; Marx's role and influence; his predecessors and followers. The topics that will be discussed include historical and dialectical materialism, the role of the proletariat in Marxian teaching, Marx and the Socialist International, the evolution of Marxian thought, Marx and the labour movement, the labour theory of value, the theory of economic development, and the breakdown of capitalism. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S465
Soviet Economics

Prerequisites: Economics S209 and S210. The evolution of the Soviet economic system and the policy measures adopted to deal with the problems of establishing and consolidating a socialist state. Special attention is given to Lenin's role in the early phase of the Soviet system and early economic measures such as the collectivization of farms. Other topics covered are: the nature of economic planning and progress under Stalin, and the important recent reforms and modifications of the Soviet system under the impact of Liberman's proposals. (3 credits) *NOTE A/See § 200.1*

GEOGRAPHY

GEOGRAPHY S345
The Geography of a Selected Region

Prerequisite: Geography S211 or S271, or second year standing in Arts. A detailed examination of the physical environment, the people, their history, and the present political and economic patterns within the region. The course will provide a deep understanding of the interrelationships between the constituents of the region, an appreciation of those factors responsible for regional unity and will also illustrate the holistic nature of the geographical discipline (6 credits) *NOTE A/See § 200.1*
NOTE: In alternate years beginning 1976-77 this course will focus on the Geography of the U.S.S.R. Students taking S345 may take this course a second time under S346.

HISTORY

HISTORY S341
History of Russia

Prerequisite: History S210. This course traces the origin of the Slavic-speaking peoples in Europe and the emergence of the Russian Empire. After a discussion of the ideology and history of Bolshevism, it studies the history of communist government in the U.S.S.R. and among the Slavic peoples. (6 credits) *NOTE A/See § 200.1*

HISTORY S445
Advanced Study in Russian and Soviet History

Prerequisites: History S210; History S341 or permission of the Department. This course deals with specific problems in Tsarist and Soviet Russia. In the Pre-Revolutionary period attention is focussed on the emancipation of the peasantry, industrialization and the growth of the opposition parties. In the Soviet period emphasis is placed on the problems of economic growth, the changing pattern of Soviet Marxism and the nature of Soviet foreign policy. (6 credits) *NOTE A/See § 200.1*

PHILOSOPHY

PHILOSOPHY S365
Studies in Russian Philosophy

Prerequisite: Second-year standing or permission of the Department. Study of the main topics in the development of Russian philosophy. Topics to be discussed include: Nihilism and Anarchism, Tolstoy's Philosophy of History, Dostoyevsky's idea of evil, Marxism. Lectures and seminars. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE

POLITICAL SCIENCE S353
Soviet and East European Politics

A study of the constitutional, political and administrative system of the Soviet Union and the East European states. Emphasis will be placed on the continuing evolution of the Communist system and the changing relationship between the Soviet Union and the other states. (6 credits) *NOTE A/See § 200.1*

41.5.7 URBAN STUDIES

The Urban Studies Programme introduces the student, through such disciplines as economics, sociology, geography and political science to the many areas of research and theory relevant to the modern city and its problems. It also provides the necessary background for later post-graduate specialization in some aspect of urban research, planning or administration.

Urban Studies Committee

ANSHEL MELAMED, *Urban Studies, Coordinator*

MAX BARLOW. *Geography (Loyola)*

JOHN BRESLAW, *Economics*

RONALD BRYANT, *Geography*

JOSEPH FIKSEL, *Mathematics*

WALTER VAN NUS, *History*

SUSAN SHELL, *Political Science*

JOHN UDY, *Urban Studies*

VIVIENNE WALTERS, *Sociology*

ZENON ZIELINSKI, *Civil Engineering*

Programmes

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in Conjunction with § 41.3

The superscript indicates credit value.

72 BA Honours in Urban Studies

18 Urban St S260[6];
Urban St—Geog S401[6];
Urban St S491[6]
6 Soc S210[6] or Geog S211[6]*
9 Econ S209[3], S210[3], S426[3]
9 Soc S441[3], S450[6]
6 Pol Sc S240[6], or S330[6]
6 Pol Sc S334[6]
6 Geog Sc S331[6]
12 Chosen from Econ S274[3], Math S207[3] and Econ S375[3],
Geog S260[3], S261[3], S362[3]; Soc S241[6], S411[6], S412[6], S413[6]

NOTE: If a student has taken in CEGEP any of the introductory courses required in the Major, Specialization, or Honours programme, course substitutions from the Cognate List must be made to add up to 72 credits for the Honours programme.
**NOTE: Urban Studies S260 will serve as prerequisite for Urban courses in Sociology or Geography.*

72 BA Specialization in Urban Studies

18 Urban St S260[6]; Urban St—Geog S401[6]; Urban St—S491[6]
6 Soc S210[6] or Geog S211[6]*
9 Econ 209[3], S210[3], S426[3]
9 Soc S441[3], S450[6]
6 Pol Sc S240[6], or S330[6]
6 Pol Sc S334[6]
6 Geog S331[6]
12 Chosen from Cognate list in consultation with the Coordinator of Urban Studies

*NOTE: If a student has taken in CEGEP any of the introductory courses required in the Major, Specialization or Honours programme, course substitutions from the Cognate List must be made to add up to 60 credits. *NOTE: Urban Studies S260 will serve as prerequisite for Urban courses in Sociology or Geography.*

60 BA Major in Urban Studies

18 Urban St S260[6];
Urban St—Geog S401[6];
Urban St S491[6]
6 Soc S210[6] or Geog S211[6]*
9 Econ S209[3], S210[3], S426[3]
9 Soc S441[3], S450[6]
6 Pol Sc S240[6], or S330[6]
6 Pol Sc S334[6]
6 Geog S331[6]

NOTE: If a student has taken in CEGEP any of the introductory courses required in the Major, Specialization, or Honours programme, course substitutions from the Cognate List must be made to add up to 60 credits for the Majors programme.

**NOTE: Urban Studies S260 will serve as prerequisite for Urban courses in Sociology or Geography.*

30 Minor in Urban Studies

24 Urban St S260[6]; Geog S331[6]; Urban St—Geog S401[6]; Urban St S491[6]
6 Chosen from Soc S210[6]; Geog S211[6]*; Econ S209[3], S210[3], S426[3]; Soc S441[3], S450[6]; Pol Sc S240[6], S330[6], S334[6]

**NOTE: Urban Studies S260 will serve as prerequisite for Urban courses in Sociology or Geography.*

Cognate List:

Students are advised to take note of the prerequisite requirements for some of these courses
Int St S221[3], S222[3]
Urban St S492[6]
Journ S201[6], S301[6], S401[6] App Soc Sc S212[6], S413[6], S441[3], S461[6]
Econ S274[3], S304[3], S305[3], S375[3], S420[6], S427[3]
Geog S260[3], S261[3], S355[6], S362[3], S363[3], S457[6]
Pol Sc S320[6], S333[6]
Soc S241[6], S411[6], S412[6], S413[6], S431[6], S440[3], S448[3], S449[3]
Admin C350[3]
Fin C215[3], C314[3], C418[3]
QM C243[3], C244[3], C313[3], C314[3]
Civ Eng C472[3], C571[3], C572[3], C573[3]
Comp Sc C211[3], C220[3], C223[3]
Art Hist C249[6], C446[6]
Cinema C211[6], C311[6], C411[6]

COURSES IN URBAN STUDIES

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1.

CENTRE FOR INTERDISCIPLINARY STUDIES

URBAN STUDIES S260
Urban Development

An introductory course in Urban Develop-

ment using an interdisciplinary approach to the process of urbanization, the city as a social system, the city as an economic system and the built environment. The material will be presented by films, tapes and special readings. The films cover historic London, Ibadan and Chicago. (6 credits) *NOTE A/See § 200.1*

URBAN STUDIES—GEOGRAPHY S401
Applied Urban Studies

Prerequisites: Geography S211 or Urban Studies S260; Geography S331 previously or concurrently. A study of the contemporary city with emphasis on the problems arising from urban growth. Attention will be given to the possibilities for planned development including New Towns. The material will be presented by films, tapes and special readings and there will be a discussion each week. (6 credits) *NOTE A/See § 401*

URBAN STUDIES S491
Seminar in Urban Studies

Seminar limited to second and third-year students in the Urban Studies programme. Each student must prepare and submit an appropriate research paper. (6 credits) *NOTE A/See § 200.1*

NOTE: With the permission of the Coordinator a student may take this course twice for credits provided that a different subject is dealt with the second time. He will register the second time under Urban Studies S492.

URBAN STUDIES S492
Seminar in Urban Studies

Prerequisite: Permission of the Coordinator. A student repeating Urban Studies S491 for credits will register under Urban Studies S492. (6 credits) *NOTE A/See § 200.1*

ECONOMICS

ECONOMICS S209
Introduction to Microeconomics

Introduction to the functioning of the market system; concepts of supply and demand; the role of prices in resources allocation; production decisions by firms. Analysis of differences between competition and monopoly and the implications for economic efficiency; theories of labour markets and wage determination. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S210
Introduction to Macroeconomics

An introduction analysis of aggregate economic activity. The focus is on the principles of determination of the level of employment, national income, real output, inflation, and international balance of payments. The course also analyzes the principles which govern the trade relations among countries. These topics are integrated by a discussion of government monetary and fiscal policies to stabilize economic activity. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S274
The Use of Economic Data

Prerequisites: Economics S209 and S210. Concepts of economic accounting and related measurement techniques, with special reference to the procedures used in Canada and in international economic institutions like the U.N., I.M.F., and O.E.C.D. The topics include: national accounts, input-output tables, flow-of-funds accounts, national balance sheets, international and interregional comparison of economic data, choice of index. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S304
Canadian Economic Policy I

Prerequisites: Economics S209 and S210. A study of the effects of government policies on resource allocation with emphasis on Canadian policy problems. Topics will include government regulation of business, agriculture policy, transportation policy, and tariff policy. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S305
Canadian Economic Policy II

Prerequisites: Economics S209 and S210. A study of trade, government stabilization, growth, and welfare policies with emphasis on Canadian policy problems. Topics also include monetary and fiscal policies, policies to encourage growth, and social security policies. (3 credits) *NOTE A/See § 200.1*
NOTE: Students who have credits for Economics N-405, or Economics N-431 before 1969-70 may not take this course for credits.

ECONOMICS S375
Introduction to Statistics for Economists

Prerequisite: Mathematics S207. The course is an introduction to the application of statistical techniques to economic data. Topics discussed will include, among others, time series, statistical inference, analysis of variance, correlation and regression (3 credits) *NOTE A/See § 200.1 Credits will be given for only one 6 credit course or two 3 credit courses from Economics S375, Geography S362 and S363, Mathematics N-241, Quantitative Methods C243 and C244, Sociology S241, Psychology S241 and Psychology S242.*

ECONOMICS S426
Urban Economics

Prerequisites: Economics S209 and S210. This course will focus on the basic issues of economic growth and stagnation, urban land use, the problems of the urban public economy, and special urban problems such as transportation, congestion, poverty, housing and urban renewal, and zoning. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S427
Regional Economics

Prerequisites: Economics S209 and S210. Economics S311 or S318 previously or concurrently, or Economics S426. This course introduces the student to the methods and techniques of regional economic analysis and their application to the problems of regional economies within Canada. Among the micro-economic topics covered are the location behaviour of firms and households and the factors determining the allocation of land among alternative competing uses. Macroeconomic topics include the measurement and analysis of regional income and growth levels, cyclical changes in those levels, and interregional differences in growth rates. Policy problems pertinent to Canadian regions are stressed throughout the course. (3 credits) *NOTE A/See § 201.1*

ECONOMICS S446
The Economic Development of Quebec

Prerequisites: Economics S209 and S210. This course will review past and present trends in the economic development of Quebec, though emphasis will be placed on the economic growth of Quebec since the Second World War. Attention will be given to the regional aspects of its growth problems. (3 credits) *NOTE A/See § 200.1*

GEOGRAPHY

GEOGRAPHY S211
Introduction to Human Geography

A study of the evolution of the earth's populated area and the gradual enlargement of geographical horizons. The emphasis will be on cultural distributions, landscape and settlement, and the geography of economic, social, and political activities. (6 credits) *NOTE A/See § 200.1*

GEOGRAPHY S260
Introduction to Cartography I

A study of the map as a tool of the geographer. Assignments of a practical nature will emphasize the history, design, drawing and use of maps. Additionally, the course will focus on the use and application of qualitative and quantitative materials and methods as they relate to modern cartography. Lectures and laboratory. (3 credits) *NOTE A/See § 200.1*
NOTE: Students who have credits for 060 or 061; or N-261 or 261 before 1973-1974 may not take this course for credits.

GEOGRAPHY S261
Introduction to Cartography II

Prerequisite: Geography S260 or permission of the Department. A study of the map and its use in portraying different types of information in various ways. Additionally, the course will focus on the use of air photos and their interpretation as an aid to the cartographer. Design balance and drawing skills are further developed. Lectures and laboratory. (3 credits) *NOTE A/See § 200.1*

GEOGRAPHY S331
Urban Geography

Prerequisite: Geography S211, or second year standing in an honours, specialization, or departmental major programme in the Social Sciences or the Faculty of Commerce. A study of the prehistoric town, the Greek and Roman town, towns in the Middle Ages, the trading city, the pioneer town and the modern metropolis. The distribution of such towns, their development, growth and internal pattern of organization will be looked at from an historical and geographical point of view. Problems of conurbations and large metropolitan cities in the present age will be discussed and evaluated. Special emphasis will be given to Canadian cities, to their site, function, organization, growth and development as well as to urban problems relating to zoning, transportation, urban renewal, etc. (6 credits) *NOTE A/See § 200.1*

GEOGRAPHY S355
Spatial Organization

Prerequisite: Geography S211 or second year standing in an honours, specialization, or major programme in the Social Sciences or in the Faculty of Commerce. A study of how man organizes spatial activities with the emphasis on the concepts of spatial interaction, location of activities, diffusion and individual decision. (6 credits) *NOTE A/See § 200.1*

GEOGRAPHY S362
Quantitative Geography I

Prerequisite: Geography S261. An introductory course in the applications of descriptive and analytical statistical techniques in Geography. Lectures and laboratory. (3 credits) *NOTE A/See § 200.1*
NOTE: Only 6 credits will be given from Economics S375; Geography S362 and S363; Mathematics N-241; Quantitative Methods C243 and C244; Sociology S241; Psychology S241 and S242.

GEOGRAPHY—URBAN STUDIES S401
Applied Urban Studies

Prerequisites: Geography S211 or Urban Studies S260; Geography S331 previously or concurrently. A study of the contemporary city with emphasis on the problems arising from urban growth. Attention will be given to the possibilities for planned development including New Towns. The material will be presented by films, tapes and special readings and there will be a discussion each week. (6 credits) *NOTE A/See § 200.1*

GEOGRAPHY S457
Geography of Transportation

Prerequisite: Geography S211, S331 or S355 or permission of the Department. A study of patterns of transport facilities and traffic flows. Emphasis will be on general concepts of route alignment, network layouts, and on applications of spatial interaction models to economics flows. (6 credits) *NOTE A/See § 200.1*
NOTE: Prior to 1976-77 this course was a 3 credit course.

POLITICAL SCIENCE

POLITICAL SCIENCE S240
Comparative Politics

A course in comparative politics with special emphasis on the dynamics of the political process. Going beyond constitutional and institutional procedures, this course will include the study of informal realities of decision-making. Most of the illustrative content is based on a comparative study of Canada, the United States, Great Britain and France. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S320
Problems and Concepts in Political Theory

A course in political theory emphasizing key concepts such as equality, liberty and power. The content of the course will include basic methodology and terminology to the extent that the thematic orientation in any given year requires its inclusion. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S330
Government and Politics of Canada

A study of the parliamentary system in Canada with emphasis placed upon the development and judicial interpretation of the British

North America Act, the federal system, the nature and organization of political parties, the evolution of cabinet rule, the judicial structure and contemporary problems in Canada. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S333
Problems of Public Administration

Prerequisite: Political Science S240 or S330. This course deals with the nature and function of the administrative branch of government. The student is introduced to such problems as the organization of government departments, the management of government corporations, budgeting, selection and training of personnel, maintenance of morale and discipline, relationship between legislature and administration, relationship between the administration and the public. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S334
Urban Politics

Prerequisite: Political Science S240 or S330. A course in the problems and prospects in urban politics with special emphasis on the processes of the local community. This course, although primarily dealing with urban politics in Canada, will also go beyond national boundaries for its comparative treatment. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY

SOCIOLOGY S210
Introduction to Sociology

This course analyzes social problems in modern society and introduces the student to the basic concepts and most important approaches in Sociology. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY S241
Statistics

Prerequisites: Sociology S210; and high school Algebra. An introductory course in descriptive and analytical statistical methods for students of Sociology. Lectures and laboratory. (6 credits) *NOTE A/See § 200.1*
NOTE: Only 6 credits will be given from: Economics S471, S375, Geography S362, S363, Mathematics N-241, Quantitative Methods C243, C244, Sociology S241, Psychology S241, S242

SOCIOLOGY S411
Research Techniques

Prerequisites: Sociology S210, S241 or equivalent, and S310. This course is an advanced consideration of the design of research, the methods of data collection, and the techniques of analysis. (3 credits) *NOTE A/See § 200.1*

SOCIOLOGY S412
Field Work Research

Prerequisites: Sociology S210 and S310. Methods of fieldwork research in Sociology will be explored and examined in detail. (3 credits) *NOTE A/See § 200.1*

SOCIOLOGY S413
Survey Research Methods

Prerequisites: Sociology S210, S241 or equivalent, and S310. Methods of conducting survey research will be examined, such as research design, sampling methods, design and pre-testing of instruments, methods of data collection, logic of analysis and techniques of multivariate analysis and report writing. (3 credits) *NOTE A/See § 200.1*

SOCIOLOGY S440
Community Studies

Prerequisite: Sociology S210. Based upon selected community studies, this course will focus upon an interpretation of the findings of these studies within the larger context of urbanization and industrialization with special emphasis given to the methodology of community studies. (3 credits) *NOTE A/See § 200.1*

SOCIOLOGY S441
Sociology of Urban Regions

Prerequisite: Sociology S210. The physical and social characteristics of urban communities are studied with special attention paid to ecological patterns and ecological process. Forms of adjustment, co-operation and control are included in these studies. (3 credits) *NOTE A/See § 200.1*

SOCIOLOGY S448
Population and Society

Prerequisite: Sociology S210, or an introductory course in a social science. This course consists of a brief survey of population theory and an introduction to the techniques of population analysis. It will cover the size, distribution, and composition of the population; changes in these characteristics; the relationship between population trends and social and economic conditions, with special reference to recent trends. (3 credits) *NOTE A/See § 200.1*

SOCIOLOGY S450
Seminar in Urban and Metropolitan Studies

Prerequisite: Sociology S441. Intensive study of a few theories and selected monographs dealing with aspects of urbanization. (6 credits) *NOTE A/See § 200.1*

41.5.8 WOMEN'S STUDIES

This programme is designed to present a comprehensive view of women in society and to stimulate an interest in the study of women.

Women's Studies Committee

CHRISTINE ALLEN, *Philosophy, Co-ordinator*
ROSLYN BELKIN, *English*
DOLORES GOLD, *Psychology*
DEBORAH GREENSPOON, *Political Science*
ELIZABETH HENRIK, *Psychology*
SHEILA McDONOUGH, *Religion*
CERISE MORRIS, *Sociology*
GRETA NEMIROFF, *Women's Studies*
LEWIS POTEET, *English*

MORTON STELCNER, *Economics*
VERONICA STRONG-BOAG, *History*
MAIR VERTHUY, *French*
VIVIENNE WALTERS, *Sociology*

Programme

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 41.3.

The superscript indicates credit value.

30 Minor in Women's Studies

3 Wom St S241[3]
3 Wom St S242[3]
24 Rel S333[3] and S334[3]; Hist S328[6]; Psyc S383[6]; Soc S458[6]; Pol Sc S321[6]; Econ S310[3]; Engl S251[3], S252[3]

NOTE: Substitutions may be made with permission of the Women's Studies Coordinator.

COURSES IN WOMEN'S STUDIES

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1

CENTRE FOR INTERDISCIPLINARY STUDIES

WOMEN'S STUDIES S241
Woman's Identity and Image: Historic Attitudes

An interdisciplinary study of the nature of woman as understood by western society from its Greek origins to the mid-nineteenth century. Sample topics are: the Greek myths, the Bible (Eve and Mary), Greek philosophy (Plato and Aristotle), courtly love, medieval mysticism and Victorianism (Kierkegaard, Schopenhauer, Queen Victoria and Ibsen). (3 credits) *NOTE A/See § 200.1*

WOMEN'S STUDIES S242
Woman's Identity and Image: Recent Approaches

An interdisciplinary study of the nature of woman as understood by western society from the mid-nineteenth century to the present. Sample topics are: the effect of the Industrial Revolution on the family (Marx and Engels), the emancipation of women (John Stuart Mill, Virginia Woolf), the psychology of woman (Freud and Jung), and contemporary attitudes towards women and Women's Liberation. (3 credits) *NOTE A/See § 200.1*

ECONOMICS

ECONOMICS S310
Economics of Discrimination

Prerequisites: Economics S209 and S210. The purpose of this course is to examine some economic issues of discrimination with particular reference to women in a Canadian context. Among the topics so examined are: techniques for measuring discrimination and poverty, review of empirical studies, traditional and radical approaches to the study of discrimination, and policies to combat discrimination and poverty. (3 credits) *NOTE A/See § 200.1*

ENGLISH

ENGLISH S251
Selected Topics in Literature Written by Women

This course explores the ways in which women have employed conventions of such literary genres as poetry, the novel and the drama to define their own lives and those of their contemporaries. The emphasis will be on literary analysis of the works; the course will also deal with the social and historical circumstances which are relevant to the works in question. The texts studied, the themes and concepts pursued, will vary from year to year. (3 credits) *NOTE A/See § 200.1*

ENGLISH S252
Selected Topics in Literature Written by Women

A student repeating English S251 for credits will register under English. S252. (3 credits) *NOTE A/See § 200.1*

HISTORY

HISTORY S328
Women in Western History

A review of the position and roles of women in Western history prior to the 17th century. Beginning with the 17th century, a more detailed discussion of these themes and close scrutiny of selected problems having to do with the roles of women in Europe, Canada and the United States during the last two centuries. Among the problems to be treated will be the history of the Feminist movements, the relationship of women to the process of industrialization and the impact of the world wars of this century on the condition of women. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE

POLITICAL SCIENCE S321
Women and the Law

A historical and comparative study of the status of women as seen in different legal systems. The course will deal with women in relation to private, family and public law. The framework will be primarily legal, but will also include a consideration of the social and political implications of women's legal status. Special attention will be directed to Quebec and Canadian law. (6 credits) *NOTE A/See § 200.1*

PSYCHOLOGY

PSYCHOLOGY S383
Sexual Differentiation

Prerequisites: Psychology S211 and second year standing. This course will examine the physiological, genetic and social factors that determine sex identity and will consider how sex identify influences life patterns. The effects of these factors on social, motivational and cognitive development and adjustment will be studied. (6 credits) *NOTE A/See § 200.1*

RELIGION

RELIGION S333
Women and Religion I

An examination of the roles and images of women in the history of religions. Topics might include: the development of patriarchal religion, religion and sexuality, women and myth, the roles of women in different religious communities. This course will include an integrated sequence of lectures (minimum three weeks) by an anthropologist on matriarchal and patriarchal societies. (3 credits) *NOTE A/See § 200.1*

RELIGION S334
Women and Religion II

An examination of the religious and ethical questions raised by contemporary discussions of women's experience. Topics might include: the recent beginnings of a feminist theology, the feminist critique of organized religion and society, the effects of male perspective upon philosophy and theology and women in the ministry. (3 credits) *NOTE A/See § 200.1*

SOCIOLOGY

SOCIOLOGY S458
The Sociology of Sex Roles

Prerequisite: Sociology S210. This course will focus on sociological aspects of sex roles. Modern social trends will be analyzed, with special attention to emerging egalitarian patterns and changes in the socio-economic system. (6 credits) *NOTE A/See § 200.1*

41.5.9 UNDERGRADUATE SCHOLARS PROGRAMME

The Undergraduate Scholars Programme of the Sir George Williams Faculty of Arts is designed to meet the needs of responsible students with high academic standing whose educational goals can best be achieved through an individually tailored programme of study. Such students must register in a programme leading to the Bachelor of Arts degree with a major, specialization, or honours in an area of concentration, although the approach may be of an interdisciplinary nature.

Each programme of study is planned through consultation between the scholar and a faculty adviser from his main field of interest. As many as 54 of the 90 credits required for the degree may be taken as Undergraduate Scholars Programme credits or tutorials. This work might take the form of guided independent study, independent field or laboratory research or creative activity. Its precise nature will depend on the scholar's educational goals, interests and area of specialization.

Since this programme involves a great deal of individual attention on the part of faculty members, the number of entrants is necessarily limited. Students wishing to apply are therefore encouraged to prepare their applications as early as possible. Each student should submit a written statement of educational goals and arrange to have a collegial transcript and two letters of recommendation forwarded to:

The Coordinator
Undergraduate Scholars Programme
Room Q-103
Concordia University
Sir George Williams Faculty of Arts
1455 de Maisonneuve West
Montreal, P.Q. H3G 1M8

Undergraduate Scholars Programme Committee

MAIR VERTHUY, *French, Co-ordinator*
RICHARD DIUBALDO, *History*
DALLAS LASKEY, *Philosophy*
MICHAEL OPPENHEIM, *Religion*
BRUCE SMART, *Assoc. Registrar*
NAREJDA RAJDEV, *Student Representative*
RONALD OGILVIE, *Student Representative*

41.6 Centre for the Teaching of English as a Second Language

Professor and Director of the Centre
RICHARD C. YORKEY

Professor
ANNE M. STOKES

Associate Professor
JOE DARWIN PALMER
BRUCE BARKMAN
JEAN McCONOCHIE

Visiting Associate Professors
ALAN DAVIES
JEAN PRANINSKAS

Assistant Professors
PALMER ACHESON
PATSY LIGHTBOWN
RONALD MACKAY
GWEN S. NEWSHAM
BRIAN MICHAEL SMITH

Lecturers
B. MARY PETRIE
V. ALEX SHARMA

Sessional Instructors
ELYSE ENGEL
ROSALYN FREEDMAN
CAROL FRASER

41.6.1 CURRICULUM FOR THE DEGREE OF BACHELOR OF EDUCATION (English as a Second Language)

Elementary School Option
Secondary School Option

The Centre for the Teaching of English as a Second Language offers the Degree of Bachelor of Education (English as a Second Language).

Admission Requirements

General admission requirements are listed in § 13.

Specific requirements are as follows:

1. Satisfactory completion of a two-year pre-university programme in a CEGEP or equivalent. Within the programme the students will be required to have successfully completed the equivalent of four semester courses in English.
2. Owing to the specialized nature of this programme, no more than 30 pro tanto credits will normally be permitted, and the University reserves the right to determine which ones these should be.
3. Language competence: Students will be required to have reasonable fluency in the target language. An English language diagnostic test will be administered to determine English language competence. Students planning to teach in the French school system are expected to have reasonable fluency in French. A test for French language competence will be administered.

Degree Requirements

Definition of Credit:

Up to and including the academic year 1973-74, degree programmes have been expressed in terms of courses, with one credit being applied to a "full-course" (normally two terms) and one half-credit being applied to a "half-course" (normally one term).

Starting in 1974-75, in accordance with the recommendations of the Quebec Council of Universities, the credit-base was modified to take into account the total activity of the student. Students preparing for the degree of Bachelor of Education (English as a Second Language) take a minimum of 90 credits. Each credit represents, for the average student, a minimum of 45 hours of work spread across lectures, conferences, laboratories, studio or practice-periods, test, examinations and personal work.

90 BEd (English As a Second Language)

36*

a) *Elementary Option*
TESL S211[3], S221[3], S231[3], S318[3], S322[3], S341[3], S382[3], S411[3], S415[3], S422[3], S482[6]

b) *Secondary Option*
TESL S211[3], S221[3], S231[3], S318[3], S323[3], S341[3], S383[3], S412[3], S415[3], S423[3], S483[6]

c) *Adult Option*
TESL S211[3], S221[3], S231[3], S318[3], S323[3], S341[3], S384[3], S412[3], S415[3], S423[3], S484[6]

12 Chosen from TESL S201[3], S351[3], S431[3], S434[3], S442[3], S491[3], S492[3], Ling S221[6], Ling S441[6]
18 Education S201[6], S210[6], S230[3], S453[3]
6 English S211[6] or S311[6]
6 English literature to be approved by the Centre
12 Elective credits from any department

** Students are advised to divide the required TESL courses by year as follows:*

Year I TESL S211[3], S221[3], S231[3]

Year II TESL S318[3], S322[3] or S323[3], S341[3], S382[3] or S383[3] or S384[3]

Year III TESL S411[3] or S412[3], S415[3], S422[3] or S423[3], S482[6] or S483[6] or S484[6]

NOTE: Those possessing the degree of Bachelor of Education (English as a Second Language) Elementary or Secondary option will obtain a specialist teaching permit from the Quebec Ministry of Education.

41.6.2 CERTIFICAT D'ENSEIGNEMENT DE L'ANGLAIS, LANGUE SECONDE (Programme intensif de perfectionnement)

The Centre for the Teaching of English as a Second Language offers a 30 credit programme leading to the Certificat d'enseignement de l'anglais, langue seconde au niveau élémentaire et secondaire.

Successful candidates who are certified elementary school teachers will also obtain a specialist teaching permit from the Quebec Ministry of Education.

This programme is part of the Ministry of Education's emphasis on the improvement of second language teaching.

Admission Requirements

Applicants must apply to their school boards and be approved by the Ministry of Education. Successful candidates are granted a five-month sabbatical with full pay during which time they follow intensive courses at the University in the Day division. These five-month periods extend from September to January and February to June. Candidates in both terms return for additional courses during the summer session of the same year of study. Supervised internship takes place during the five-month training and for a further period after the students have returned to the school in which they are employed.

Other applicants may be considered for admission to the programme on the basis of their experience and additional criteria deemed appropriate by the Centre. However such students, while eligible for the certificate if they meet the demands of the programme, may not obtain a teaching permit from the Ministry of Education.

Courses

Au niveau élémentaire
ESL S203[6], ESL S204[3], TESL S221[3], TESL S322[3], TESL S231[3], TESL S411[3], TESL S415[3], TESL S422[3], TESL S479[3]
NOTE: Native speakers of English may, with the approval of the Centre, take a substitute course for ESL S203[6].

Au niveau secondaire
ESL S203[6], , TESL S221[3], S323[3], S231[3], S415[3], S318[3], S341[3] or S412[3], S423[3], S479[3].
NOTE: Native speakers of English may, with the approval of the Centre, take a substitute course for ESL S203[6].

NOTE: The offering of this programme in 1977-78 is contingent upon authorization from the Ministry of Education.

A temps partiel
Elémentaire
Engl S211[6], TESL S221[3], S231[3], S322[3], S341[3], S411[3], S415[3], S422[3], S479[3].

Secondaire
Engl S211[6], TESL S221[3], S231[3], S323[3], S318[3], S341[3] or S412[3], S415[3], S423[3], S479[3].

41.6.3 CERTIFICATE IN THE TEACHING OF ENGLISH AS A SECOND LANGUAGE

Admission Requirements

1. Candidates must have an appropriate teacher's certificate or must have the equivalent of one year's experience as a full-time language teacher.
2. Candidates must demonstrate competence in spoken and written English through formal tests and an interview at the TESL Centre.
3. Candidates planning to teach in Quebec will be expected to have reasonable fluency in French. Those who feel deficient should arrange to improve their French proficiency to an appropriate level.
4. Candidates who meet these admission requirements but who have never taught English as a second language in a classroom for a minimum of 400 hours must complete TESL S382, TESL S383 or TESL S384 before certification.

NOTE: Candidates who wish to obtain *un certificat de spécialization* must have a teaching diploma recognized by Quebec, at either the elementary or secondary levels. In Quebec, the holder of the Certificate is granted one year's *scolarité* (D.G.E.E.S. Adm. 73-54 sec. 1.1.1.6). Upon successful

completion of this programme, it is the responsibility of the individual to apply to the TESL Centre for *le certificat de spécialization.*

Elementary, Secondary or Adult Options

This is a 30-credit programme comprising courses in Applied Linguistics and English. It is offered in the day and evening divisions and the special summer session. The 30 credits which comprise this certificate are an integral part of the 90-credit requirement for the BEd (TESL) degree.

a) *Elementary Option*
- 6 English S211[6] or S311[6]
- 6 English Literature to be approved by the Centre
- 18 TESL S211[3], S221[3], S231[3], S322[3], S415[3], S422[3]

b) *Secondary Option and Adult Option*
- 6 English S211[6] or S311[6]
- 6 English Literature to be approved by the Centre
- 18 TESL S211[3], S221[3], S231[3], S323[3], S415[3], S423[3]

41.6.4 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1.

All TESL courses may be regarded as courses in the Humanities or in the Social Sciences.

ESL 100
English Language

A course for students whose first language is other than English and who require additional training in order to achieve a level of expression acceptable to the university. The focus of the course is primarily on the development and improvement of writing skills. All candidates will be tested prior to entry. (6 credits) *NOTE A/See § 200.1*

ESL S201
English Language and Composition

Prerequisite: Successful completion of ESL-100 or proven equivalent competence in English. This course is designed for non-English students who have completed secondary school or its equivalent in a language other than English. The course encourages the development of effective written communication and improved reading comprehension so that the student may perform competently in his other university work. (6 credits) *NOTE A/See § 200.1*

ESL S203
Effective Communication I

This course is offered only to students enrolled in the programme, *Certificat d'enseignement de l'anglais, langue seconde (programme intensif de perfectionnement).* The aim of the course is to develop a high degree of proficiency in both oral communication, and aural and reading comprehension. (6 credits). *NOTE A/See § 200.1*

ESL S204
Effective Communication II

This course is offered only to students enrolled in the programme, *Certificat d'enseignement de l'anglais, langue seconde (programme intensif de perfectionnement).* The aim of the course is to encourage the development of clear, effective writing. Aspects of styles such as appropriate levels of usage, choice of diction, and tone will be studied. (3 credits) *NOTE A/See § 200.1*

TESL S201
Speech

This is an introductory course for non-native speakers of English who have difficulty with the English sound system. It is a practical application of the knowledge of the sound, stress, intonation, and rhythm patterns of English in effective oral communication. (3 credits) *NOTE A/See § 200.1*

TESL S211
Introduction to Language and Applied Linguistics

This course is an introduction to the study of language and linguistics. The course includes an overview of the nature and function of communication; speech and writing; socio-linguistics, psycho-linguistics, historical and descriptive linguistics; and the relevance and application of these areas of scholarship to second-language teaching. (3 credits) *NOTE A/See § 200.1*

TESL S221
Comparative Phonetics

This course is for students who intend to be English teachers. It teaches the phonetic and phonemic features of English and the methodology of corrective practice. A comparison of the phonological systems of English and French is emphasized. A proficiency test of spoken English will be administered at the beginning of the course. (3 credits) *NOTE A/See § 200.1*

TESL S231
Modern English Grammar

This course is for students who intend to be English teachers. The course includes a review of the analytical grammar of English, both traditional and modern, with emphasis on how language is used to express meaning, and a detailed description of English morphology and syntax. A proficiency test of written English will be administered at the beginning of the course. (3 credits) *NOTE A/See § 200.1*

TESL S318
The Teaching of Reading and Writing

Prerequisite: 9 TESL credits. This course analyzes the relation between speech and writing, and surveys the structure and function of written English. Techniques and procedures for teaching reading and writing skills are studied and demonstrated, and current ESL materials are evaluated. Students are expected to prepare specimen materials for developing reading and writing skills in the classroom. (3 credits) *NOTE A/See § 200.1*

TESL S322
Methodology I—Elementary

Prerequisite: TESL S221 and TESL S231, and admission to the Certificate or BEd programme, or permission of the Department. This course considers current theory of applied linguistics and the methods and materials appropriate to ESL instruction in elementary schools. Emphasis is on teaching the spoken language. The principles of selection and sequencing, and the technique of presentation, practice, and production are introduced. The preparation of specimen instructional materials is required. (3 credits) *NOTE A/See § 200.1*

TESL S323
Methodology I—Secondary

Prerequisite: TESL S221 and TESL S231, and admission to the Certificate or BEd programme, or permission of the Department. This course considers current theory of applied linguistics and the methods and materials appropriate to ESL instruction in secondary schools. Emphasis is on teaching the spoken language. The principles of selection and sequencing, and the techniques of presentation, practice, and production are introduced. The preparation of specimen instructional materials is required. (3 credits) *NOTE A/See § 200.1*

TESL S341
Language Acquisition

Prerequisite: TESL S221, S231. This course analyzes the developmental processes in native language acquisition. The psycho-linguistic factors involved in the child's conversion of language input into linguistic performance and their implication for second-language learning are studied. (3 credits) *NOTE A/See § 200.1*

TESL S351
History and Development of the English Language

Prerequisite: TESL S221 or TESL S231 or permission of the Department. A study of the morphological, phonological, syntactical and semantic changes that have taken place from Proto-Indo-European to the present. Students are required to do elementary linguistic analyses of texts from different stages in the development of the language. (3 credits) *NOTE A/See § 200.1*

TESL S382
Practice-Teaching and Observation—Elementary

Prerequisite: TESL S322. This course introduces the inexperienced teacher to the practice and procedures of teaching English as a second language. Practice includes lesson planning, classroom management, and techniques for teaching language skills. Micro-teaching, peer-teaching, and mirror-viewing are essential requirements. Students who register for this course will practise at the elementary level. (3 credits) *NOTE A/See § 200.1*

TESL S383
Practice-Teaching and Observation—Secondary

Prerequisite: TESL S323. This course introduces the inexperienced teacher to the practice and procedures of teaching English as a second language. Practice includes lesson planning, classroom management, and techniques for teaching language skills. Micro-teaching, peer-teaching, and mirror-viewing are essential requirements. Students who register for this course will practise at the secondary level. (3 credits) *NOTE A/See § 200.1*

TESL S384
Practice-Teaching and Observation—Adult

Prerequisite: TESL S323. This course introduces the inexperienced teacher to the practice and procedures of teaching English as a second language. Practice includes lesson planning, classroom management, and techniques for teaching language skills. Micro-teaching, peer-teaching, and mirror-viewing are essential requirements. Students who register for this course will practise at the adult level. (3 credits) *NOTE A/See § 200.1*

TESL S411
Audio-Visual Aids in ESL—Elementary

Prerequisite: TESL S322 previously or concurrently. This course examines audio-visual resources and their effective use in second-language teaching. It familiarizes the student with the use of technical apparatus and with the effective use of simple teaching aids with particular regard for the needs of elementary students. Production of appropriate classroom materials is required. (3 credits) *NOTE A/See § 200.1*

TESL S412
Audio-Visual Aids in ESL—Secondary

Prerequisite: TESL S323 previously or concurrently. This course examines audio-visual resources and their effective use in second-language teaching. It familiarizes the student with the use of technical apparatus and the effective use of simple teaching aids for secondary and adult students. Production of appropriate classroom materials is required. (3 credits) *NOTE A/See § 200.1*

TESL S415
Testing and Evaluation

Prerequisite: TESL S322 or S323. An introduction to the general purposes and methods of language testing with a description of the chief characteristics of sound educational measures. The course examines the processes involved in constructing and administering ESL tests designed to evaluate proficiency in the four major skills: listening, speaking, reading and writing. (3 credits) *NOTE A/See § 200.1*

TESL S422
Methodology II—Elementary

Prerequisite: TESL S322. This course introduces the criteria for assessment and adaptation of methods and materials.
Emphasis is on the written language. Students are expected to produce materials and lesson plans appropriate to the elementary school level. (3 credits) *NOTE A/See § 200.1*

TESL S423
Methodology II—Secondary

Prerequisite: TESL S323. This course introduces the criteria for assessment and adaptation of methods and materials.
Emphasis is on the written language. Students are expected to produce materials and lesson

plans appropriate to the secondary school level. (3 credits) *NOTE A/See § 200.1*

TESL S431
Grammatical Theory

Prerequisite: TESL S231. This course surveys current theories of grammar and their influence in applied linguistics, with further studies in generative-transformational grammar and generative semantics. The importance of grammatical theory is considered in relation to philosophy, psychology, sociology, comparative linguistics, and pedagogy. (3 credits) *NOTE A/See § 200.1*

TESL S434
Error Analysis

Prerequisite: 15 TESL credits. A study of errors made by the ESL learner. This course considers recurring types of intralingual and developmental errors in language use. Teaching procedures will take such developmental and structural conflicts into consideration. (3 credits) *NOTE A/See § 200.1*

TESL S442
Problems in Bilingualism

Prerequisite: 15 TESL credits. An examination of the social and psychological background of languages in contact, with particular emphasis on the situation in Quebec. Motivation for second language learning in schools is studied in terms of cultural and socio-economic factors. In addition such extra-linguistic influences as the historic and political context of bilingualism in Canada are covered. (3 credits) *NOTE A/See § 200.1*

TESL S479
Internship

This course is offered only to students enrolled in the programme *Certificat d'enseignement de l'anglais, langue seconde.* It will involve observation and supervised teaching practice both in the university and in the schools. The course will also include seminar sessions for analysis and discussion of teaching performance. (3 credits) *NOTE A/See § 200.1*

TESL S482
Internship—Elementary

Prerequisite: TESL S382. This internship is closely integrated with TESL S422 and TESL S411. The course provides practical application of the theories and information discussed in classes. The course requires 100 hours of supervised internship in local elementary schools, with scheduled seminar sessions and tutorials for analysis and discussion of teaching performance. (6 credits) *NOTE A/See § 200.1*

TESL S483
Internship—Secondary

Prerequisite: TESL S383. This internship is closely integrated with TESL S423 and TESL S412. The course provides practical application of the theories and information discussed in classes. The course requires 100 hours of supervised internship in local secondary schools, with scheduled seminar sessions and tutorials for analysis and discussion of teaching performance. (6 credits) *NOTE A/See § 200.1*

TESL S484
Internship—Adult

Prerequisite: TESL S384. This internship is closely integrated with TESL S423 and TESL S412. The course provides practical application of the theories and information discussed in classes. The course requires 100 hours of supervised internship at the adult level, with scheduled seminar sessions and tutorials for analysis and discussion of teaching performance. (6 credits) *NOTE A/See § 200.1*

TESL S491
Study in a Special Subject

Prerequisite: Permission of the Department. This course provides an opportunity for advanced students to intensify their study beyond the area of specialization already represented by the curriculum. The selected subject will vary with the special interest of the instructor offering the course in any given year. (3 credits) *NOTE C/See § 200.1*

TESL S492
Study in a Special Subject

Prerequisite: Permission of the Department. A student repeating TESL S491 registers for credits under TESL S492. (3 credits) *NOTE A/See § 200.1*

41.7 Journalism

Associate Professor and Director
DAVID OANCIA

Sessional Instructors
FRANCOISE COTE
JOHN DAFOE
MARK FEIFER
JAMES STEWART

41.7.1 PROGRAMME

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 41.3

The superscript indicates credit value.

30 Minor in Journalism

30 Journ S201[6], S205[3], S301[6], S305[3], S401[6], S405[3], S410[3]

41.7.2 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1.

JOURNALISM S201
Writing and Reporting I

This course gives training in basic reporting and newswriting. Students will practise writing news and will receive out-of-classroom assignments. (6 credits) *NOTE A/See § 200.1*
NOTE: Enrolment is limited to 20 students. Admission is determined by an interview with the Director of the programme following tests for a high level of competence in written English. Applicants are advised that a working knowledge of French is important.

JOURNALISM S205
History of Journalism

A history of the news media in the English-speaking world, starting with the government gazettes of seventeenth-century England and their illegal, underground competition, through the "news" papers of the eighteenth century, the rise of the yellow press, the human interest story, the penny press in the nineteenth century, down to today's corporate press. The course is designed to show that our expectations of the news media are not inherent in human nature, but are the result of historical processes that continue to evolve. (3 credits) *NOTE A/See § 200.1*

JOURNALISM S301
Writing and Reporting II

Prerequisite: Journalism S201. A continuing general workshop in news and features writing. (6 credits) *NOTE A/See § 200.1*

JOURNALISM S305
The Media in Quebec

This course studies the special characteristics of Quebec media, and focuses on the effect the media have had on the shaping of modern Quebec. It will analyse the straight press, the pop press, radio and television. (3 credits) *NOTE A/See § 200.1*

JOURNALISM S401
Senior News Seminar

Prerequisite: Journalism S301. The students will produce each term, individually or as part of a team, a major investigative feature suitable for publication in a newspaper, magazine, or via radio or television. Seminars will analyse the problems encountered in gathering and writing or producing such news. (6 credits) *NOTE A/See § 200.1*

JOURNALISM S405
Legal Issues

Prerequisite: Permission of the Director. This course will inform the students of those aspects of the civil codes and the criminal law of Canada that could directly affect their work as journalists — copyright, libel, slander, obscenity, etc. (3 credits) *NOTE A/See § 200.1*

JOURNALISM S410
Editing and Production

Prerequisite: Journalism S301. This course will introduce the students to editing and production procedures — technical and intellectual — appropriate to different media. (3 credits) *NOTE A/See § 200.1*

41.8 Department of Classics, Modern Languages and Linguistics

Associate Professor of German and Chairman of the Department
ANNAMARIE KETTER

Professor of Classics
PAUL WIDDOWS

Associate Professor of Classics and Linguistics
CHARLES BARTON

Associate Professor of Spanish and Linguistics
JOHN D. GRAYSON

Associate Professor of Spanish and Italian and Supervisor of Hebrew
JOSEPH A. MACALUSO

Associate Professor of Russian
ANGELIKA-TATIANA SIDOROW

Assistant Professor of German
ILSE EHMER

41.8.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 41.3.

The superscript indicates credit value.

42 BA Major in German

30 Ger S241[6], S311[6], S354[6], S452[6], S453[6]
12 Chosen from Ger S451[6], S455[6], S456[3], S457[3], S458[3], S459[3]
6* Chosen Ling S221[6]; Phil S211[6] or S361[6]; Rel S443[6]; Hist S210[6]; Pol Sc S351[6]; Geog S423[6]; Lat S210[6] or S240[6]
*Optional, but recommended

51 BA Major in Indo-European Linguistics

36 Ling S221[6], S421[6], S431[6], S441[6], S490[6], S491[6]
3-6 Engl S318[3] or S460[6] or Span S412[6]
6 Gr S241[6] or Gr Elective credits at '400' level
6 Lat S240[6] or S341[6] or Lat Elective credits at '400' level

42 BA Major in Spanish

6 Chosen from Span S221[6], S222[6]
6 Span S241[6]
6 Ling S221[6]
24 Chosen from Span S311[6], S412[6], S413[6], S451[6], S452[6], S453[6], S454[6], S455[6], S456[6]

30 Minor in German

12 Ger S241[6], S311[6]
18 Chosen from Ger S354[6], S451[6], S452[6], S453[6], S455[6], S456[3], S457[3], S458[3], S459[3]

30 Minor in Ancient Greek

6 Class S212[6], S214[6]
24 AncG S210[6], S241[6], S441[6], S442[6]

30 Minor in Hebrew

24 Heb S241[6], S441[6], S442[6], S451[6]
6 Chosen from Ling S221[6]; Arabic S411[6]

30 Minor in Italian

18 Ital S221[6], S241[6], S452[6]
12 '400' level credits from Loyola Faculty of Arts and Science

30 Minor in Latin

6 Chosen from Class S212[6], S214[6]
24 Lat S240[6], S341[6], S441[6], S442[6]

30 Minor in Linguistics

24 Ling S221[6], S421[6], S431[6], S441[6]
6 Chosen from Arabic S411[6]; Ling S490[6], S491[6]; Engl S460[6]; Fr S312[6], S313[3], S417[6], S418[3]; Span S412[6]

30 Minor in Russian

12 Russ S241[6], S311[6]
18 Chosen from Russ S351[6], S452[6], S453[6], S454[3], S455[3]

NOTE: For majors and honours in Russian Studies refer to § 41.5.6 Interdisciplinary Studies.

30 Minor in Spanish

6 Chosen from Span S221[6], S222[6]
6 Span S241[6]
18 Chosen from Span S311[6], S412[6], S413[6], S451[6], S452[6], S453[6], S454[6], S455[6], S456[6]

41.8.2 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1.

ANCIENT GREEK S210
Introductory Course in Ancient Greek

The purpose of this course is to enable the student to gain a knowledge of Ancient Greek grammar and syntax adequate to the reading of simple passages of Greek. (6 credits) *NOTE A/See § 200.1*

ANCIENT GREEK S241
Ancient Greek Language and Literature

Prerequisite: Ancient Greek S210. The purpose of this course is to continue the study of Greek grammar and syntax begun in Ancient Greek S210, and to enable students to begin reading Ancient Greek authors. (6 credits) *NOTE A/See § 200.1*

ANCIENT GREEK S441
Ancient Greek Literature

Prerequisite: S241. This is essentially a reading course involving the study of certain of the great works of Ancient Greek Literature. It is assumed that the student taking this course has an adequate knowledge of Ancient Greek and a fair vocabulary. (6 credits) *NOTE A/See § 200.1*

ANCIENT GREEK S442
Ancient Greek Literature (Advanced)

Prerequisite: Ancient Greek S441 or permission of the Department. A further study of Ancient Greek Literature to follow Ancient Greek S441. (6 credits) *NOTE A/See § 200.1*

CLASSICS—HISTORY S212
History of Greece and Rome

A political, cultural and social history of Greece and Rome from the Mycenaean Age to the death of the Emperor Nero (68 A.D.), with special emphasis on fifth-century Athens and Rome of the Republic and Early Empire. No knowledge of Greek or Latin is required. (6 credits) *NOTE A/See § 200.1*
NOTE: Students who have taken 121 may not take this course for credits.

CLASSICS—HISTORY S214
History of the Roman Empire

A political, cultural and social history of the Roman Empire from the death of the Emperor Nero to Justinian the Great. Attention will be paid to the rise of Christianity, and the continuity of Roman law and administration in both the eastern and western part of the Late Roman Empire. No knowledge of Greek or Latin is required. (6 credits) *NOTE A/See § 200.1*

CLASSICS S241
Greek Literature in Translation

A survey of the major literary achievements of Ancient Greece. Special attention will be given to epic poetry, tragedy and comedy, as well as a variety of works in prose. The historical development of each of these genres will be discussed, along with a critical analysis of each author's contribution. No knowledge of Greek is required. (3 credits) *NOTE A/See § 200.1*

CLASSICS S242
Latin Literature in Translation

A study through selected readings in translation of representatives of the major genres of Latin literature (epic, drama, satire, rhetoric, lyric poetry, philosophy) up to the second century A.D. No knowledge of Latin is required. (3 credits) *NOTE A/See § 200.1*

LATIN S210
Beginners' Latin

This course is designed for students who have had no previous Latin and is particularly recommended for those students who wish to be prepared for Latin S240. The course offers instruction in Latin grammar, translation and prose composition. (6 credits) *NOTE A/See § 200.1. NOTE: Students who have received credits toward their admission for high school Latin or have credits for Latin 001 may not take this course for credits.*

LATIN S240
Latin Composition and Translation

This course consists of translation and literary interpretation of prescribed selections from the Latin classics in prose and poetry. In addition there is a review of Latin grammar and syntax and instruction in prose composition. (6 credits) *NOTE A/See § 200.1*

LATIN S341
Latin Literature

Prerequisite: Latin S240. This course continues the study of Latin literature begun in Latin S240, concentrating on particular authors. Two authors will be read during the year, one of whom will normally be Virgil. (6 credits) *NOTE A/See § 200.1*

LATIN S441
Latin Literature (Advanced)

Prerequisite: Latin S241. A continuation of Latin S241, concentrating on a particular period or the works of a particular author, e.g. Juvenal and Tacitus, or Lucretius. (6 credits) *NOTE A/See § 200.1*

LATIN S442
Latin Literature (Advanced)

Prerequisite: Latin S241. A parallel course to Latin S441 covering different authors, e.g. Latin Comedy, Latin Elegists or Horace. As Latin S441 and Latin S442 will not usually be given in the same year, Latin S442 may be taken before Latin S441. (6 credits) *NOTE A/See § 200.1*

MODERN LANGUAGES

LITERATURE IN TRANSLATION S350

A study of representative works of German or Russian literature. All reading and lectures will be in English. In any given year only one of these literatures will be offered. (6 credits) *NOTE A, C/See § 200.1*

LITERATURE IN TRANSLATION S351

A student repeating Literature in Translation S350 registers for credits under Literature in Translation S351. (6 credits) *NOTE A/See § 200.1*

LITERATURE IN TRANSLATION S352

A study of representative works of Hispanic (Peninsular and Spanish American) or Italian literature. All readings and lectures will be in English. In any given year only one of these literatures will be offered. (6 credits) *NOTE A, C/See § 200.1*

LITERATURE IN TRANSLATION S353

A student repeating Literature in Translation S352 registers for credits under Literature in Translation S353. (6 credits) *NOTE A/See § 200.1*

GERMAN S210
Introductory Course in German

A beginners' course in the German language which is designed, in one year, to make the student conversant with the grammar, pronunciation and ordinary vocabulary of the language. Emphasis is placed upon learning to speak the language, as well as to read and write it. Lectures and laboratory. (6 credits) *NOTE A, B/See § 200.1*

GERMAN S215
German for Reading Knowledge

This course will give the student sufficient background in the structure of the language to be able to read German with reasonable competence. Practice material will be both technical and non-technical. No previous knowledge of the language is required. (6 credits) *NOTE A, B/See § 200.1. This is a terminal course and may not be used as a prerequisite for advanced courses in German.*

GERMAN S241
German Language and Literature (Intermediate)

Prerequisite: German S210 or equivalent. Advanced instruction in the language. Emphasis upon idiom and usage in conversation and composition. Representative readings from the works of German writers. (6 credits) *NOTE A, B/See § 200.1*

GERMAN S311
Advanced German Language and Stylistics

Prerequisite: German S241 or equivalent. This course is intended to give the student increased fluency and a firmer command of the language. The emphasis of the course is on stylistics and composition. The subject matter will be approached through a study of German civilization. (6 credits) *NOTE A/See § 200.1*

GERMAN S354
A Study of the Deutsche Novelle

Prerequisite: German S241 or equivalent. Advanced composition and oral work. A study of the Deutsche Novelle from Goethe to Kafka. This course is conducted in German. (6 credits) *NOTE A/See § 200.1*

GERMAN S451
German Literature of the Sixteenth and Seventeenth Centuries

Prerequisite: German S241. A detailed study of representative writers of this period, such as Luther, Brant, Hans Sachs, Silesius, Grimmelshausen and others. Classes will be conducted in German. (6 credits) *NOTE A/See § 200.1*

GERMAN S452
German Literature from 1750 to 1830

Prerequisite: German S241 or equivalent. Study of the works of Lessing, Goethe, Schiller, Brentano and others. This course is conducted entirely in German. (6 credits) *NOTE A/See § 200.1*

GERMAN S453
History of the German Drama

Prerequisite: German S241 or equivalent. A study of German drama from its beginnings to modern times. Classes will be conducted in German. (6 credits) *NOTE A/See § 200.1*

GERMAN S455
Reading Course in the Modern German Novel

Prerequisite: German S354 or S311. A study of the German novel since 1900. There will be no class periods, and students will work under the direct supervision of the instructor. Regular assignments will be given, and written and oral examinations will be given at the end of the course. (6 credits) *NOTE A/See § 200.1*

GERMAN S456
The 'Hörspiel'

Prerequisites: German S241 and S311. A study of one of the youngest art forms which was developed with the help of and for a new medium, the radio. Literary and technical aspects as well as the most representative writers, i.e. Eich, Dürrenmatt, Böll, Hildesheimer and others, will be discussed. Classes will be conducted in German. (3 credits) *NOTE A/See § 200.1*

GERMAN S457
German Poetry from the Middle Ages to Modern Times

Prerequisites: German S241 and S311. A conspectus of German poetry through the centuries. Outstanding examples of representative poets will be studied in detail. Classes will be conducted in German. (3 credits) *NOTE A/See § 200.1*

GERMAN S458
Study of an Individual German Author I

Prerequisites: German S241 and S311. This course will consist of the detailed study of a German author, e.g. Kafka, Rilke, Goethe. Classes will be conducted in German. (3 credits) *NOTE A/See § 200.1*

GERMAN S459
Study of an Individual German Author II

Prerequisites: German S241 and S311. This course will consist of the detailed study of a German author, e.g. Brecht, Büchner, Lenz. Classes will be conducted in German. (3 credits) *NOTE A/See § 200.1*

HEBREW S210
Introductory Course in Hebrew

A beginners' course in Hebrew, spoken and written, with reading of classical and modern texts. Lectures and laboratory. (6 credits) *NOTE A/See § 200.1. Students who have credits for Hebrew 023 or whose schooling has been conducted in Hebrew will not be admitted to this course.*

HEBREW S241
Intermediate Course in Hebrew

Prerequisite: Hebrew S210, or two or three years of high school Hebrew or equivalent. Readings in the Bible and an introduction to modern Hebrew literature. This course will also complete the study of Hebrew grammar and syntax begun in Hebrew S210, with special emphasis on modern Hebrew usage. (6 credits) *NOTE A, B/See § 200.1*

HEBREW S441
From the Talmudic Period to the Haskalah

Prerequisite: Hebrew S241 or equivalent. Hebrew literature from Talmudic times to the Enlightenment. Classes will be conducted in Hebrew. (6 credits) *NOTE A/See § 200.1*

HEBREW S442
Medieval Literature (The Golden Age)

Prerequisite: Hebrew S441 or S451 or equivalent. A study of the literature of the Hebrew Golden Age with emphasis on Maimonides, Judah Halevi, Ibn Ezra, Ibn Gabirol, Rashi and Gersonides. Classes will be conducted in Hebrew. (6 credits) *NOTE A/See § 200.1*

HEBREW S451
Modern Literature

Prerequisite: Hebrew S241 or equivalent. A study of Hebrew literature of the 19th and 20th centuries. This course is conducted in Hebrew. (6 credits) *NOTE A/See § 200.1*

ITALIAN S210
Introductory Course in Italian

A beginners' course in the Italian language which is designed, in one year, to acquaint the student with the main grammatical principles and basic vocabulary. Practice is given in reading, writing and conversation with particular emphasis on oral work. Lectures and laboratory. (6 credits) *NOTE A, B/See § 200.1*

ITALIAN S221
Italian Civilization

Prerequisite: Italian S241 or equivalent or permission of the Department. This course is designed to introduce the student to Italy's cultural, artistic and social institutions as reflected in her *belle arti,* literature and commercial history. Certain literary works will be analysed as a reflection of her people. Generally, the period to be covered will encompass that from Italy's earliest times until the present era. Although primarily concerned with ideas and aesthetics, attention will be given to regional customs and dialectology. This course will be conducted in Italian. (6 credits) *NOTE A/See § 200.1*

ITALIAN S241
Intermediate Italian

Prerequisite: Italian S210 or two years of high school Italian or equivalent or permission of the instructor. The course consists of a complete review of Italian grammar and a study of some of the more advanced aspects of usage. Through the reading of short stories, poetry and novels, the student is given the opportunity to acquaint himself with Italian letters and civilization. (6 credits) *NOTE A, B/See § 200.1*

ITALIAN S452
Literature of the Twentieth Century

Prerequisite: Italian S241 or equivalent. A course in Italian literature of the twentieth century, from the turn of the century to the present. All genres will be considered. Classes will be conducted in Italian. (6 credits) *NOTE A/See § 200.1*

NOTE: Students interested in studying Italian language and literature beyond the levels reached in the courses described above should consult Section 51.20.3., where they will find an array of courses in the subject offered by the Loyola Faculty of Arts & Science.

RUSSIAN S210
Introductory Course in Russian

A beginners' course in the Russian language which is designed, in one year, to acquaint the student with pronunciation, the main grammatical aspects and a basic vocabulary. Emphasis is placed on speaking, reading and writing Russian. Lectures and laboratory. (6 credits) *NOTE A, B/See § 200.1. NOTE: This course may be taken for credits in the Russian Studies Programme.*

RUSSIAN S215
Reading Course in Russian

This course will give the student sufficient grasp of the structure of the language and sufficient basic vocabulary to enable him to read Russian with the aid of a dictionary. Both technical and non-technical material will be used. (6 credits) *NOTE A, B/See § 200.1*
NOTE: This is a terminal course and may not be used as a prerequisite for advanced courses in Russian.

RUSSIAN S241
Intermediate Russian

Prerequisite: Russian S210 or equivalent. This course consists of a complete review of Russian grammar, composition, reading and conversation. Through reading of short stories and additional material, the student is given the opportunity of acquainting himself with Russian culture and literature. (6 credits) *NOTE A, B/See § 200.1*
NOTE: This course may be taken for credits in the Russian Studies Programme.

RUSSIAN S311
Advanced Russian Language and Stylistics

Prerequisite: Russian S241 or permission of the instructor. This course is intended to give increased fluency and a firmer command of the language. The emphasis of the course is on stylistics and composition. Through additional reading students are given the opportunity to acquaint themselves with the various aspects of Russian civilization. Selected texts will be discussed and analysed in Russian. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Russian Studies Programme.

RUSSIAN S351
Introduction to 19th Century Russian Literature through the Short Story

Prerequisite: Russian S241 or equivalent. The short story will be used both as a subject for literary study and as a reflection of the history and social preoccupations of the period. Opportunity will be provided for discussion and some attention will be paid to composition. This course is conducted in Russian. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Russian Studies Programme.

RUSSIAN S452.
Soviet Literature

Prerequisite: Russian S241 or equivalent. A general survey of Soviet prose, drama and poetry from 1917 to the present day. The aim of the course is to familiarize the student not only with the literature itself but also with its origins and development. Opportunity will be provided for discussions and some time will be devoted to advanced composition. This course is conducted in Russian. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Russian Studies Programme.

RUSSIAN S453
Russian Drama

Prerequisite: Russian S241 or permission of the instructor. The course traces the development of Russian drama from the end of the 18th century to the present day. Such authors as *D. Fonvisin, A. Gribojedov, A. Pushkin, M. Lermontov, N. Gogol, A. Ostrowski, A. Chekhov, A Tolstoi, M. Gorki, A. Arbusov and V. Majakovskii* will be discussed. This course is conducted in Russian. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Russian Studies Programme.

RUSSIAN S454
Study of an Individual Russian Author I

Prerequisite: Russian S241 or equivalent. This course will consist of the detailed study of a Russian author, e.g. L.N. Tolstoy, F.M. Dostojevskii, N.V. Gogol. The chosen author will vary from time to time, in accordance with the needs of the students. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Russian Studies Programme.

RUSSIAN S455
Study of an Individual Russian Author II

Prerequisite: Russian S241 or equivalent. This course will consist of the detailed study of a Russian author, e.g. A.S. Pushkin, M. Ju. Lermontov, I.A. Goncharov. The choice of author will vary from time to time, in accordance with the needs of the students. (3 credits) *NOTE A/See § 200.1.*
NOTE: This course may be taken for credits in the Russian Studies Programme.

SPANISH S201
Introduction to Spanish I (3 credits)
SPANISH S202
Introduction to Spanish II

These two courses constitute a beginners' course in the Spanish language which is designed to acquaint the student in one year with the main grammatical principles and basic vocabulary. Practice is given in reading, writing and conversation, particular emphasis being placed on oral work. In the second term, classes are conducted as far as possible in Spanish. Lectures and laboratory or conference. (3 credits) *NOTE A, B/See § 200.1*
NOTE: Spanish S201 and S202 are equivalent to two years' study at the secondary or collegial level. Students having one year of secondary or collegial Spanish will register only for the second course, Spanish S202.

SPANISH S221
Spanish Civilization

Prerequisite: Spanish S241 or equivalent. This course is designed to acquaint the student with Spain's intellectual and cultural history as reflected in her writers. Although it is primarily concerned with ideas and aesthetics, attention will also be given to the development of language, customs and folklore. Classes are conducted in Spanish. (6 credits) *NOTE A/See § 200.1*

SPANISH S222
Cultural Aspects of Latin America

Prerequisites: Spanish S210 or S201 and S202 or equivalents. This course offers a brief study of pre-Columbian civilizations from original sources, and then traces Spanish-American cultural and political thinking from Colonial times to the present, as reflected in the novel and (especially) the essay. Classes are conducted in Spanish. (6 credits) *NOTE A/See § 200.1*

SPANISH S241
Spanish Language and Literature (Intermediate)

Prerequisites: Spanish S210, or S201 and S202, or two or three years of high school

Spanish, or equivalent. Included in this course are a complete review of Spanish grammar and a study of some of the more advanced aspects of usage. Through the reading of short stories and novels, the student is given the opportunity to acquaint himself with Spanish and Spanish-American letters and civilization. Classes are conducted in Spanish. (6 credits) *NOTE A, B/See § 200.1*

SPANISH S311
Advanced Spanish Composition and Stylistics

Prerequisite: Spanish S241. A course to treat in detail the finer points of Spanish stylistics. Special attention will be given to free composition and semantics. (6 credits) *NOTE A/See § 200.1*

SPANISH S412
History of the Spanish Language

Prerequisites: Spanish S241 and Linguistics S221 or permission of the Department. A study of the origins of the Spanish language from Vulgar Latin into Old Spanish and thence through the centuries. Attention will also be given to non-Latin contributions to the Spanish lexicon, stylistic development and, especially, the parallel development of the other Romance vernaculars. (6 credits) *NOTE A/See § 200.1*

SPANISH S413
Translation

Prerequisite: Spanish S241 or equivalent. Spanish S311 or any '400' level course in Spanish. This course offers to the advanced student practice in translation from English into Spanish. Specimen texts will include literary prose, commercial letters, journalistic articles, and a variety of material of current interest. (6 credits) *NOTE A/See § 200.1*
NOTE: This course should provide a useful basis for a future professional degree.

SPANISH S451
The Middle Ages

Prerequisites: Spanish S241 and any 6 credits at the '400' level in Spanish. A study of the literature of the Middle Ages. Classes are conducted in Spanish. (6 credits) *NOTE A/See § 200.1. NOTE: Students who have credits for Spanish N-422 before 1969-70 may not take this course for credits.*

SPANISH S452
Spanish Golden Age Literature

Prerequisite: Spanish S241; Spanish S221 or equivalent. This course is designed to introduce to the student the masterpieces of Spain's Siglo de Oro. Particular emphasis is given to Cervantes and the Quijote. Classes are conducted in Spanish. (6 credits) *NOTE A/See § 200.1*

SPANISH S453
Nineteenth-Century Spanish Literature

Prerequisite: Spanish S241 or equivalent. A study of representative works in prose, poetry and theatre of the writers of the last century, with particular attention given to such literary movements as romanticism, realism and naturalism. Classes are conducted in Spanish. (6 credits) *NOTE A/See § 200.1*
NOTE: Students who have credits for Spanish N-422 before 1969-70 may not take this course for credits.

SPANISH S454
Twentieth-Century Spanish Literature

Prerequisite: Spanish S241. A study of the literature of Spain, starting with the Generation of '98 and going up to the present day. Classes are conducted in Spanish. (6 credits) *NOTE A/See § 200.1*

SPANISH S455
The Literature of Spanish America

Prerequisite: Spanish S241 or equivalent. This course familiarizes the student with the history, political thought and civilization of Spanish America as expressed through her literature. Classes are conducted in Spanish. (6 credits) *NOTE A/See § 200.1*

SPANISH S456
Nineteenth-Century Spanish-American Literature

Prerequisite: Spanish S241 or equivalent. This course familiarizes the student with the history, political thought and civilization of Spanish America in the nineteenth century as expressed through her literature. Classes are conducted in Spanish. (6 credits) *NOTE A/See § 200.1*

PORTUGUESE S441
Portuguese Language and Literature

Prerequisites: Spanish S241 or equivalent and any 6 credits at the '400' level in Spanish. A course designed for advanced Spanish students. Readings in Portuguese begin as early as the second week of class. (6 credits) *NOTE A, B/See § 200.1*

ARABIC S411
Literary Arabic

Prerequisite: Linguistics S221 or permission of the instructor. This course is designed to give the student in one year a thorough understanding of modern literary Arabic through linguistic analysis of its structure. (6 credits) *NOTE A, B/See § 200.1. NOTE: This course may be taken for credits in the Asian Studies Programme.*

LINGUISTICS

LINGUISTICS S221
Introduction to Linguistics

Prerequisite: Formal study of a language other than the student's mother tongue. This course will enable the students to become familiar with the basic elements which underlie all languages and will acquaint them with a number of varied linguistic patterns with emphasis on the analysis of languages having structural features which differ widely from those ordinarily encountered. (6 credits) *NOTE A/See § 200.1*

LINGUISTICS S421
Non-Indo-European Structures

Prerequisite: Linguistics S221 or permission of the Department. This course is intended to acquaint the student in depth with the structures of several languages differing markedly in

their nature from Indo-European. Possible areas of study might be Eskimo, Finnish, Japanese, Swahili, Turkish, some Amerindian or Malayo-Polynesian language, etc. As a general rule, only four languages are investigated in a particular year. (6 credits) *NOTE A/See § 200.1*

LINGUISTICS S431
Comparative Indo-European Linguistics

Prerequisite: Linguistics S221 or permission of the Department. Through a comparative study of the phonology and morphology of the various branches of the Indo-European language family (Indo-Iranian, Hellenic, Italic, Germanic, Slavic, Baltic, etc.,) this course will familiarize the student with the techniques used in linguistic reconstruction. Emphasis will be given to the development and differentiation of languages through time. (6 credits) *NOTE A/See § 200.1*

LINGUISTICS S441
Advanced Linguistic Theory

Prerequisite: Linguistics S221. A study of current trends in linguistic theory with particular emphasis on transformational-generative and stratificational theory. The influence of de Saussure on present-day theoretical developments will be considered as well as that of the American structuralists. Tagmemic theory and case grammar will also be discussed. (6 credits) *NOTE A/See § 200.1*

LINGUISTICS S490
Special Topics in Linguistics

Prerequisite: Linguistics S221 or equivalent. This course offers an opportunity for detailed examination of a particular area of Linguistics. (6 credits) *NOTE A, C/See § 200.1*

LINGUISTICS S491
Special Topics in Linguistics

Prerequisite: Permission of the Department. A student repeating Linguistics S490 registers for credits under Linguistics S491. (6 credits) *NOTE A/See § 200.1*

41.9 Department of English

Associate Professor and Chairman of the Department
MICHAEL BRIAN

Professors
HENRY BEISSEL
MALCOLM FOSTER
WYNNE FRANCIS
MATTHEW HODGART
RYTSA TOBIAS

Associate Professors
GERALD AUCHINACHIE
ROSLYN BELKIN
CLARK BLAISE
AUDREY BRUNE
MERVIN BUTOVSKY
HOWARD FINK
STANTON HOFFMAN
DAVID KETTERER
ELIZABETH MacLEAN
DAVID McKEEN
LEONARD MENDELSOHN
PATRICIA MORLEY
EDWARD PECHTER
LEWIS POTEET
ABRAHAM RAM
G. DAVID SHEPS
RICHARD SOMMER
JOHN R. SORFLEET

Assistant Professor
EYVIND RONQUIST

Assistant Professor of English Language and Coordinator Mature Student Programme-English Composition
BARBARA OPALA

Assistant Professor of English Language
GWENDOLINE PILKINGTON

41.9.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 41.3

The superscript indicates credit value.

60 BA Honours in English

6* Chosen from Engl S241[6], S260[6], S262[6], S263[6], S267[6]
6 Chosen from Engl S231[3], S232[3], S281[6], S282[6], S283[6], S287[6]
18 Chosen from Engl S333[6], S334[6], S335[6], S336[6], S337[6], S460[6], S466[6]
6 Chosen from Engl S374[6], S375[6], S376[6]
6 Chosen from Engl S244[6], S343[6], S344[6], S348[6], S440[6]
12 Engl Elective credits (excluding S211[6], S311[6])
6 Engl Elective credits at '400' level

**One of Engl S225[6], S226[6], S227[6], may be substituted for one of these courses.*
NOTE: At least 36 credits must be taken at the '300' or '400' level.

72 BA Honours in English and Philosophy

18 Chosen from Engl S333[6], S334[6], S335[6], S336[6], S337[6], S374[6], S375[6], S487[6]
18 Chosen from Engl S231[3], S232[3], S244[6], S344[6], S348[6], S351[6], S353[6], S356[6], S363[6], S367[6], S376[6], S430[6], S448[3], S456[3], S459[6], S460[6], S466[6], S476[6]
6 Phil S210[6], or S211[6] or, if exempted, 6 Phil Elective credits
6 Phil S380[6]
6 Chosen from Phil S221[6], S321[6], S369[6]
6 Chosen from Phil S231[6],S271[6], S273[6], S301[6], S361[6], S369[6], S372[3], S374[3], S376[3], S378[3]
6 Chosen from Phil S369[6], S405[6]
6 Chosen from Phil S321[6], S333[6], S365[6], S396[3], S405[6], S407[6], S431[6], S493[6]; Wom St S241[3], S242[3]

60 BA Honours in English and Religion

12 Engl S333[6], S430[6]
6 Engl S375[6] or S376[6]
12 Chosen from Engl S244[6], S334[6], S335[6], S336[6], S337[6], S348[6], S374[6], S375[6] or S376[6]
12 Rel S301[3], S302[3], S341[6]
6 Chosen from Rel S211[6], S213[6], S361[6], S362[6], S363[6]

6 Chosen from Rel S443[6], S465[6]
6 Chosen from Rel S311[6], S312[6], S313[6], S325[3], S326[3], S327[3], S328[3], S330[3], S361[6]

48 BA Major in English

6 Chosen from (A)* Engl S241[6], S260[6], S262[6], S263[6], S267[6] or
(B) Engl S231[3], S232[3], S281[6], S282[6], S283[6], S287[6]
12 Chosen from Engl S333[6], S334[6], S335[6], S336[6], S337[6], S460[6], S466[6]
6 Chosen from Engl S374[6], S375[6], S376[6]
6 Chosen from Engl S244[6], S343[6], S344[6], S348[6], S440[6]
18 Engl Elective credits at '300' and '400' level (excluding S311[6])

**One of Engl S225[6], S226[6], S227[6] may be substituted for one course in (A).*

30 Minor in Creative Writing

12 Chosen from Engl S225[6], S226[6], S227[6]
12 Chosen from Engl S311[6], S425[6], S426[6], S427[6]
6 credits in modern or contemporary English Literature at the '300' or '400' level

30 Minor in English

6 Chosen from Engl S231[3], S232[3], S281[6], S282[6], S283[6], S287[6]
6 Chosen from Engl S333[6], S334[6], S335[6], S336[6], S337[6], S460[6], S466[6]
6 Chosen from Engl S374[6], S375[6], S376[6]
12 Engl Elective credits at '300' and '400' level (excluding S311[6])

30 Minor in English Language

30 Engl S211[6], S241[6], S287[6], S311[6], S315[3], S318[3]

41.9.2 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1.

ENGLISH S209
Elements of Written English
Prerequisite: Permission of the Department. This course will deal with problems in written English which students encounter when writing university assignments. The course will begin a few weeks after the commencement of term. This will give students an opportunity to register for it after they have discovered deficiencies in their written English which hinder their academic progress. (3 credits) *NOTE A/See § 200.1*

ENGLISH S211
English Composition
This course is designed to help the students to develop skills in writing, research, and documentation, so that they may be able to prepare written accounts of their work clearly, concisely, and in a logically organized way. (6 credits) *NOTE A/See § 200.1*

ENGLISH S225
Creative Writing: Poetry
A seminar in the writing and criticism of poetry, including detailed discussion and written criticism of the students' work, and, at the discretion of the instructor, the study of selected poems. Students taking English S225 are urged to take English S231 as well. (6 credits) *NOTE A/See § 200.1*

ENGLISH S226
Creative Writing: Prose
A seminar in the techniques of short fiction, including investigations of and exercises in a variety of creative and technical problems, as well as analysis and criticism of the students' own work. Students may be required to read selected works of short fiction. (6 credits) *NOTE A/See § 200.1*

ENGLISH S227
Creative Writing: Drama
A seminar in the writing of plays, including an exploration of dramatic forms and techniques. The students are expected to submit work of their own for discussion and analysis. (6 credits) *NOTE A/See § 200.1*

ENGLISH S231
Introduction to Poetry
A study of poetry and its forms with emphasis upon the art of close reading. (3 credits) *NOTE A/See § 200.1*

ENGLISH S232
Short Fiction
A study of forms and techniques of the short story, the Novella, and what have come to be called in contemporary literature "fictions". (3 credits) *NOTE A/See § 200.1*

ENGLISH S237
Children's Literature
A survey and analysis of literature for children, undertaken with the aim of developing a critical vocabulary and of arriving at workable standards of assessment. The kinds of literature discussed will include works written for adults but traditionally read by children as well, works specifically written or adapted for children, fairy tales and other children's versions of folklore and myth, nursery rhymes and other children's verse. The course will be of general interest to students of literature, and should prove especially helpful to those who teach children in the schools. (6 credits) *NOTE A/See § 200.1*

ENGLISH S238
Canadian Children's Literature
This course examines the ways in which elements of the Canadian experience such as language, setting, folklore and history have contributed to the content and tradition of children's literature in Canada. (3 credits) *NOTE A/See § 200.1*

ENGLISH S239
Topics in Children's Literature
This course deals with specific topics such as the works of an author or group of authors,

or a particular theme, or development of a genre. The topics to be studied may vary from year to year. (3 credits) *NOTE A/See § 200.1*

ENGLISH S241
Major Writers in English

An introduction to major periods of English literature through the study of such representative authors as Chaucer, Shakespeare, Marlowe, Jonson, Donne, Milton, Swift, Pope, Blake, Coleridge, Wordsworth, Keats, Shelley, Dickens, Hardy, Browning, Tennyson, Conrad, Lawrence, Yeats, Eliot, Woolf, Joyce. (6 credits) *NOTE A/See § 200.1*

ENGLISH S244
Canadian Literature

An introductory survey of Canadian prose and poetry, written in or translated into English, from their origins to the present. (6 credits) *NOTE A/See § 200.1.*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

ENGLISH S251
Selected Topics in Literature Written by Women

This course explores the ways in which women have employed conventions of such literary genres as poetry, the novel, and the drama to define their own lives and those of their contemporaries. The emphasis will be on literary analysis of the works; the course will also deal with the social and historical circumstances which are relevant to the works in question. The texts studied, the themes and concepts pursued, will vary from year to year. (3 credits) *NOTE A/See § 200.1.*
NOTE: This course may be taken for credits in the Women's Studies Programme.

ENGLISH S252
Selected Topics in Literature Written by Women

A student repeating English S251 for credits will register under English S252. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Women's Studies Programme.

ENGLISH S260
Myth in Literature

The sources, development, and continuing function of some central Mediterranean myths. The course defines the nature and functions of myth, traces the most influential myths from their first appearance in literature to their transformation in the Christian art of Europe, and goes on briefly to examine their use by contemporary writers. The primary texts include the Bible in the King James version, and such works as the Apocrypha, the *Odyssey*, selected Greek tragedies, and Ovid's *Metamorphoses*. (6 credits) *NOTE A/See § 200.1*

ENGLISH S262
Medieval Literature in Translation

An introductory study of some major works in England and Europe between 400 and 1400, beginning with St. Augustine, and including examples of epic, Grail literature and courtly romance, such as *Beowulf, The Song of Roland, The Cid,* Chrétien de Troyes' *Parsifal, Tristan and Isolde, The Romance of the Rose,* and parts of Dante's *Divine Comedy*. (6 credits) *NOTE A/See § 200.1*

ENGLISH S263
European Literature from the End of the Middle Ages to the Onset of Modernism

A study of some of the classical works of European literature from Dante to Dostoevsky, including such writers as Boccaccio, Rabelais, Cervantes, Rousseau and Goethe, with emphasis on evolving cultural patterns leading from Faith to Reason and beyond. (6 credits) *NOTE A/See § 200.1*

ENGLISH S267
The Origins of Drama

An introductory study of Greek and Roman dramatists, and the medieval drama, both English and Continental. The course will be concerned with dramatic types, theory and form, and with the significance of this drama to the later English stage. (6 credits) *NOTE A/See § 200.1*

ENGLISH S281
Tragedy: A Literary Mode

A study of the varieties of tragic form and sensibility in Western literature. The course includes writers chosen from antiquity to the present, both within and outside the English tradition, such as Shakespeare, Euripides, Hardy, Tolstoy, Webster, Racine, Faulkner, Buchner, Rilke and Chekhov. (6 credits) *NOTE A/See § 200.1*

ENGLISH S282
Comedy: A Literary Mode

A study of the varieties of comic form and sensibility in Western literature. The course includes writers chosen from antiquity to the present, both within and outside the English tradition, such as Jonson, Aristophanes, Sterne, Cervantes, Meredith, Balzac, Gogol, Molière, Holberg, Leacock, Morgenstern and Amis. (6 credits) *NOTE A/See § 200.1*

ENGLISH S283
Satire: A Literary Mode

Its vision and its form, traditional and contemporary. The course includes writers chosen from antiquity to the present, both within and outside the English tradition, such as Chaucer, Juvenal, Lucian, Swift, Erasmus, Voltaire, Thackeray, Grass, Roth, Beckett, Waugh, Richler and orwell. (6 credits) *note a/See § 200.1*

ENGLISH S287
Critical Approaches to Literature

A study of the variety of major theories and their practical application to works of literature, with special emphasis on 20th century criticism. (6 credits) *NOTE A/See § 200.1*

ENGLISH S311
Non-Fiction Writing

Prerequisite: English S211 or permission of the Department. This course is designed for students already in control of the basic techniques of composition who wish to further develop their ability in writing in a variety of genres, including feature articles, news stories, biographies, reports and reviews. The students' work is given analysis and evaluation by the instructor and by fellow classmates in a workshop setting. (6 credits) *NOTE A/See § 200.1*

ENGLISH S315
English Prose Style

This course is designed to introduce students to the experience and assessment of the subtleties and varieties of prose style within the English tradition. It will include selections from the works of distinguished prose stylists. (3 credits) *NOTE A/See § 200.1*

ENGLISH S318
History and Structure of the English Language

The course deals with the linguistic and historic development of the English language. The influence of language changes upon the literature will also be considered. (3 credits) *NOTE A/See § 200.1*

ENGLISH S333
English Renaissance Literature

A study of poetry and prose in England from More to Milton, including such writers as Erasmus, Wyatt, Surrey, Sidney, Spenser, Bacon, Donne, the Metaphysical poets, Jonson, the Caroline lyricists, Browne. (6 credits) *NOTE A/See § 200.1*

ENGLISH S334
English Literature of the Restoration and 18th Century

A study of poetry and prose from the 1660's to the 1780's, including such major writers as Dryden, Swift, Pope and Johnson. (6 credits) *NOTE A/See § 200.1*

ENGLISH S335
English Literature of the Romantic Period

A study of poetry and prose, chiefly that of Blake, Wordsworth, Coleridge, Byron, Shelley and Keats. (6 credits) *NOTE A/See § 200.1*

ENGLISH S336
Victorian Literature

A study of English poetry and prose from the 1830's to the end of the nineteenth century, including such major writers as Tennyson, Browning, Hopkins, Carlyle, Newman, Ruskin, Dickens, Thackeray and Eliot. (6 credits) *NOTE A/See § 200.1*

ENGLISH S337
Modern British and American Literature

A study of works in English from what has now emerged as the "Modern" period, extending from the turn of the century to World War II, and including such writers as Conrad, Joyce, Lawrence, Eliot, Yeats, Dylan Thomas, Stevens, Hemingway, Faulkner, Frost and Synge. (6 Credits) *NOTE A/See § 200.1*

ENGLISH S343
Canadian Literature from the 1820's to the 1930's

Prerequisite: Second year standing. A study of prose, poetry and drama, principally written in English, including such writers as McCulloch, Haliburton, Moodie, DeMille, Kirby, Lampman, Roberts, Pratt, Grove and Stead. (6 credits) *NOTE A/See § 200.1.*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

ENGLISH S344
Modern Canadian Literature

Prerequisite: English S244. A study of prose, poetry and drama, principally written in English, from the 1930's to the present, including such writers as Laurence, MacLennan, Richler, Lowry, Klein, Callaghan, Layton, Livesay, Birney, Avison, Reaney, Nowlan and Ryga. (6 credits) *NOTE A/See § 200.1.*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

ENGLISH S348
American Literature

A survey of the literature of the United States beginning with the early writers and their optimistic vision of a new society, and studying such problems as the transformation and inversions of the "American Dream" in such writers as Poe, Hawthorne, Melville, Twain, Whitman and Fitzgerald. (6 credits) *NOTE A/See § 200.1*

ENGLISH S351
Modern Poetry

An examination of the characteristic elements of twentieth-century poetry, in the context of a study of such major poets as Yeats, Eliot, Pound, Stevens and Auden. (6 credits) *NOTE A/See § 200.1*

ENGLISH S353
Modern Drama

A study of the main currents in Western drama since Ibsen. This course will include such representative playwrights as Chekhov, Lorca, Strindberg, Pirandello, O'Neill, Brecht, Pinter, Beckett and Weiss. (6 credits) *NOTE A/See § 200.1*

ENGLISH S356
Modern European Literature

A survey of some of the major European writers (in translation) of the last hundred years, including such writers as Dostoevsky, Kafka, Mann, Strindberg, Valéry, Pirandello and Sartre. (6 credits) *NOTE A/See § 200.1*

ENGLISH S363
English Renaissance Drama

A study of English drama from the Tudor interlude to the closing of the theatres in 1642, including such dramatists as Kyd, Marlowe, Dekker, Jonson, Beaumont and Fletcher, Webster, Middleton and Ford. Some consideration will also be given to Shakespeare. (6 credits) *NOTE A/See § 200.1*

ENGLISH S364
Restoration and Eighteenth-Century Drama

A study of the English stage from Dryden to Sheridan, including such dramatists as Etherege, Otway, Wycherley, Vanbrugh, Congreve, Gay, Lillo and Goldsmith. (3 credits) *NOTE A/See § 200.1*

ENGLISH S365
The English Theatre in the Nineteenth Century

A study of drama and dramatic modes from Shelley to Shaw, including forms such as the melodrama, the Gothic thriller, Romantic verse drama, comedy, farce, burletta, operetta, and

the "new drama" of the 1890's. Among features that may be considered are innovations such as limelight and the act curtain, the emphasis on spectacle, and the phenomena of the star system and the actor-manager. (3 credits) *NOTE A/See § 200.1*

ENGLISH S367
The English Novel from Defoe to Dickens

A study of the origins and early development of the English novel, including such forms as the epistolary, the picaresque, the Gothic and historical novel, and such major writers as Fielding, Richardson, Sterne, Austen, Scott, the Brontes, George Eliot and Thackeray. (6 credits) *NOTE A/See § 200.1*

ENGLISH S368
The English Novel from Dickens to Conrad

A study of the later Victorian and Edwardian novel, including such writers as Trollope, Meredith, Butler, Hardy, James, Wells, Galsworthy, Bennett and Forster. (6 credits) *NOTE A/See § 200.1*

ENGLISH S374
Chaucer

A study of the major poetry of Chaucer, emphasizing *The Canterbury Tales and Troilus and Criseyde.* (6 credits) *NOTE A/See § 200.1*

ENGLISH S375
Shakespeare

An examination of Shakespeare's artistic achievement in some of the major plays. (6 credits) *NOTE A/See § 200.1*

ENGLISH S376
Milton: The Puritan as Poet

A study of Milton's poetry, informed by the aesthetic principles articulated in his prose and guided by his acknowledged admiration for Spenser. (6 credits) *NOTE A/See § 200.1*

ENGLISH S386
Literature, Ideology and Society

Prerequisite: Second-year standing. Studies in the relations between literature and its social, cultural and political environment. The content of this course may vary from year to year and may include such topics as the relations between modern Anglo-Irish literature and the Irish nationalist movement; social change and the evolution of forms of characterization in fiction; and theory and practice of the avant-garde; or confessional modes in literature in relation to social and political messianism. (6 credits) *NOTE A/See § 200.1*

ENGLISH S425
Advanced Creative Writing: Poetry

Prerequisite: English S225 or approved work. A workshop in the writing of poetry. The students are expected to enter this course with competence in the fundamentals of the form, and to go on, by experimenting more fully with its material and techniques, to demonstrate their further progress in the craft. (6 credits) *NOTE A/See § 200.1*

ENGLISH S426
Advanced Creative Writing: Prose

Prerequisite: English S226 or approved work. A workshop in the writing of fiction. The students are expected to enter this course with competence in the fundamentals of the form, and to go on, by experimenting more fully with its materials and techniques, to demonstrate their further progress in the craft. (6 credits) *NOTE A/See § 200.1*

ENGLISH S427
Advanced Creative Writing: Drama

Prerequisite: English S227 or approved work. A workshop in the writing of plays. The students are expected to enter this course with competence in the fundamentals of the form, and to go on, by experimenting more fully with its materials and techniques to demonstrate their further progress in the craft. (6 credits) *NOTE A/See § 200.1*

ENGLISH S430
The Aesthetic and Religious Experience in Literature

Prerequisite: Second-year standing. An interdisciplinary course which explores the relationships between literature and religion through practical criticism, literary theory, aesthetics and theology. (6 credits) *NOTE A/See § 200.1*

ENGLISH S440
The Literatures of Canada and the United States

Prerequisite: One of English S244, S348. It would be to the student's advantage to enter this course with knowledge of both literatures. Studies in common and contrasting problems in the two national literatures. (6 credits) *NOTE A/See § 200.1*

ENGLISH S442
World Literatures Written in English

Prerequisite: Second-year standing. Studies of works in English from selected areas such as the Caribbean, New Zealand, Australia, Asia and Africa, by such writers as Naipaul, Walcott, Ashton-Warner, White, Narayan, Paton, Lessing and Achebe. (6 credits) *NOTE A/See § 200.1*

ENGLISH S443
World Literatures Written in English

A student repeating English S442 for credits registers under English S443. (6 credits) *NOTE A/See § 200.1*

ENGLISH S448
Special Studies in Canadian Literature

Prerequisite: One of English S343, S344; An intensive study of a limited aspect of Canadian literature which may deal, from year to year, with an individual author or work, or a particular problem, such as "Regionalism and the Diction of Canadian Poetry", "Prairie Fiction" or "Canadian Drama". (3 credits) *NOTE C/See § 200.1*

NOTE: This course may be taken for credits in the Canadian Studies Programme.

ENGLISH S449
Special Studies in Canadian Literature

A student repeating English S448 for credits registers under English S449. (3 credits) *NOTE A/See § 200.1*

ENGLISH S456
Special Studies in Modern Fiction

Prerequisite: One of English S344, S337, S356. A detailed study of an individual author

or work of fiction, or a specific problem, in any modern literature written in or translated into English. (3 credits) *NOTE A, C/See § 200.1*

ENGLISH S457
Special Studies in Modern Fiction
A student repeating English S456 for credits registers under English S457. (3 credits) *NOTE A/See § 200.1*

ENGLISH S459
Contemporary Literature
Prerequisite: Six Credits in Modern Literature, e.g. English S344, S337, S348, S356, S351 or S353. A study of poetry, prose fiction and drama, written in or translated into English since the Second World War. This course is intended for the student whose exploration of modern literature has already suggested to him something of the radical experimentation in form which characterizes contemporary literature. (6 credits) *NOTE A/See § 200.1*

ENGLISH S460
Old English
A study of the language and literature of the Anglo-Saxon era, chiefly of the *Beowulf* epic. (6 credits) *NOTE A/See § 200.1*

ENGLISH S466
Middle English Literature
A study of literature written in the English dialects from 1200 to 1500, including works such as *Sir Gawain and the Green Knight* and other romances, early lyrics, religious prose, drama, and selections from Layamon's Arthurian *Brut*, Langland's *Piers Plowman*, and Malory's *Morte D'arthur*. (6 credits) *NOTE A/See § 200.1*

ENGLISH S476
Special Studies in Shakespeare
Prerequisite: English S375. An exploration in depth of individual plays and poems by Shakespeare, as well as particular problems presented by them. The topic considered in any one year might be "the Problem Plays", "the Romances", "Mask and Disguise", or "the Shakespeare play as Satire". (3 credits) *NOTE A/See § 200.1*

ENGLISH S478
Special Studies in Renaissance Literature
Prerequisite: One of English S333, S363. This course is designed for an intensive study of a limited aspect of the poetry, prose or drama of the period, and may deal, from year to year, with such topics as "the Sonnet Sequences", "the Metaphysical Poets", "Rhetoric, Poetics and Critical Theory" and "Renaissance Fiction". (3 credits) *NOTE C/See § 200.1*

ENGLISH S479
Special Studies in Renaissance Literature
A student repeating English S478 for credits registers under English S479. (3 credits) *NOTE A/See § 200.1*

ENGLISH S487
Theories and Criticism of Literature
Prerequisite: English S287. This course explores problems in criticism and theoretical approaches to literary art and experience from antiquity to the present, including such problems as symbol and metaphor, instruction and delight, mimesis and catharsis, form and inspiration, audience and social value, convention and genius. (6 credits) *NOTE A/See § 200.1*

ENGLISH S491
Honours Essay
Prerequisite: Open to third-year Honours students. Under the supervision of a faculty member, students will write a scholarly critical essay of some 7,500 to 10,000 words. (3 credits)

ENGLISH S492
Seminar in a Special Subject
Prerequisite: Second-year standing. This course is designed to provide an opportunity for study and discussion of literature at a relatively advanced level. It is taught, from year to year, by different members of the English Department, and the subject changes to accord with the special interests of each instructor. (6 credits) *NOTE C/See § 200.1*

ENGLISH S493
Seminar in a Special Subject
A student repeating English S492 for credits registers under English S493. (6 credits) *NOTE A/See § 200.1*

ENGLISH S496
Seminar in a Special Subject
Prerequisite: Second-year standing. This course is designed to provide an opportunity for study and discussion of literature at a relatively advanced level. It is taught, from year to year, by different members of the English Department and the subject changes to accord with the special interests of each instructor. (3 credits) *NOTE C/See § 200.1*

ENGLISH S497
Seminar in a Special Subject
A student repeating English S496 for credits registers under English S497. (3 credits) *NOTE A/See § 200.1*

These courses were offered in the summer of 1976.

ENGLISH N-234/1
Fantasy and Beyond: The Dimensions of Children's Literature
(6 credits)

ENGLISH N-350/1
Eighteen Ways of Looking at Modern Poetry
(6 credits)

ENGLISH N-488/1
Literary Criticism and Composition
(6 credits)

ENGLISH N-444/1
Forms and Frontiers of Fiction
(6 credits)

41.10 Department of French

Professor and Chairman of the Department
GILBERT TAGGART

Professor
PAUL D'HOLLANDER

Professor in the Conservatory of Cinematographic Art
SERGE LOSIQUE

Associate Professors
MICHEL EUVRARD
ALBERT JORDAN
CLAUDE LEVY
PIERRE PARC
MAIR VERTHUY

Assistant Professors
PIERRE L'HERAULT
JEAN SCHNEIDER

41.10.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 41.3

The superscript indicates credit value.

60 BA Honours in French

Pattern A (Literature emphasis)

36 Fr S214[6], S241[6], S310[6], S321[6], S331[6], S491[6]
24 Fr Lit Elective credits

60 BA Honours in French

Pattern B (Linguistics emphasis)

24 Fr S241[6], S310[6], S321[6], S331[6]
24 Fr S312[6], S314[6], S410[6], S417[6]
12 Fr Elective credits at '300' or '400' level

48 BA Major in French

6 Chosen from Fr S214[6], S310[6]
18 Fr S241[6], S321[6], S331[6]
24 Fr Elective credits at '300' or '400' level (in consultation with Department)

30 Minor in French

6 Chosen from Fr S214[6], S310[6]
12 Fr S241[6], S321[6], S331[6]
12 Fr Elective credits at '300' or '400' level

72 BA Major in French/English Translation

12 Chosen from Fr S214[6], S310[6], S410[6]
6 Fr S429[6]
18 Engl S211[6], S311[6], S337[6]
6 Chosen from Fr S222[6], S241[6], S321[6], S331[6]
6 Chosen from Engl S241[6], S244[6], S356[6]
24 Fr S314[6], S415[6], S440[3], S441[3], S442[3], S443[3]

41.10.2 DEPARTMENT OF FRENCH

Where to start studies in French at the university level:

French S201 is designed for students who have had no French, or up to two years of high school French in the Province of Quebec or equivalent.

French S202 and *S203* are intended for students who have had from two to three years of high school French in the Province of Quebec or equivalent.

French S211 is intended for students having no substantial amount of course work in French beyond the high school level.

French S214 is intended for students who have taken one or more courses beyond high school containing a substantial amount of written French.

French S310 is intended for students whose schooling at the high school level has been conducted in French.

Students who do not fall into one of these categories are asked to consult the Department of French.

Since university level credits cannot be given for French conversation only, all language courses contain a varying quantity of written work, grammatical study and civilization material, as well as oral work.

41.10.3 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1.

FRENCH S201
Beginners' French (Language I)

This course is designed for students who lack any previous training in French. Intensive class instruction and laboratory drill should permit the student to master the basic structures of French in both written and oral aspects. Satisfactory progress in this course will admit students to French S211. Lectures and laboratory. (6 credits) *NOTE A, B/See § 200.1*
Students who have received credits toward their admission for high school French may not take this course for credits. Any student who is not sure of his standing must consult the chairman of the Department prior to registration.

FRANÇAIS S202
Français élémentaire II

Préalable: Français S201 ou équivalent ou deux ans de cours de français à l'école secondaire. Révision des structures de base du français élémentaire, élargissement du vocabulaire, pratique de la conversation, phonétique corrective. On cherchera à amener l'élève à une meilleure compréhension du français oral et à une plus grande aisance d'expression par des conversations dirigées et l'emploi d'enregistrements dans la salle de classe. Les connaissances de l'élève en français écrit seront maintenues et augmentées par un emploi judicieux d'exercices écrits (3 crédits) *NOTE A/See § 200.1*

FRANÇAIS S203
Français élémentaire III

Préalable: Français S202 ou équivalent ou trois ans de cours de français à l'école secondaire. Approfondissement des connaissances orales et écrites du français élémentaire. (3 crédits) *NOTE A/See § 200.1.*
NOTE: Les étudiants ne pourront recevoir plus de 6 crédits pour l'ensemble des cours S201, S202, S203.

FRANÇAIS S211
Langue II et composition élémentaire

Préalable: Français S201 ou quatre ans de cours de français à l'école secondaire ou équivalent ou l'autorisation du département. Ce cours, destiné aux étudiants ayant déjà une certaine préparation en français oral et écrit qui désirent parfaire leurs connaissances pratiques de la langue, comporte une étude intensive des structures au laboratoire, de nombreux devoirs écrits et l'analyse de certains textes français et québécois. La structure et le contenu du cours sont les mêmes pour toutes les sections, mais le choix des romans étudiés dépend de chaque professeur. (6 crédits) *NOTE A, B/See § 200.1*
NOTE: Les étudiants inscrits au programme d'études canadiennes peuvent suivre ce cours avec crédits.

FRANÇAIS S214
Langue III et composition

Préalable: Français S211. Ce cours permet d'acquérir plus d'aisance et de correction dans l'expression orale et écrite en français. Il convient particulièrement aux étudiants qui ont l'intention d'enseigner le français ou de se spécialiser dans cette langue. Ce cours, donné entièrement en français, comprend la rédaction de compositions sur des sujets variés, des exposés oraux suivis de débats, l'étude de textes et de romans choisis par le professeur de chaque section, des exercices écrits menant à une meilleure connaissance de la grammaire et de la syntaxe. (6 crédits) *NOTE A/See § 200.1*
Les étudiants qui ont fait leurs études en français ne seront pas admis dans ce cours.

FRANÇAIS S222
La littérature française moderne

Préalable: Français S211. Aucun préalable n'est exigé pour les étudiants dont la première langue est le français. Ce cours est surtout destiné aux étudiants qui n'ont pas l'intention de se spécialiser en français et en particulier à ceux qui choisiraient leur cours obligatoire de littérature en littérature française. Le but du cours est d'encourager l'appréciation du roman comme oeuvre littéraire et comme expression significative de l'expérience occidentale des cent dernières années. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S241
Introduction à l'histoire de la culture et de la civilisation françaises

Préalable: Français S211. Abondamment illustré de projections, ce cours a pour but essentiel d'amener les étudiants à replacer la littérature dans son contexte historique, social, politique et artistique. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S310
Composition avancée I

Préalable: Français S214. Ce cours traite des différentes méthodes de la composition française: description, narration et dissertation: un intérêt particulier est cependant accordé à cette dernière ainsi qu'à l'analyse de textes vu leur importance pour les étudiants qui songent à préparer mémoires et thèses. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S312
Histoire de la langue française

Préalable: Français S214. Ce cours retrace l'évolution de la langue du latin vulgaire au français contemporain. Les étapes successives de cette évolution sont illustrées par l'étude de textes appropriés. Le cours est donné en français. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S313
La phonétique française

Préalable: Français S214 pour les étudiants dont la langue maternelle est le français, 6 crédits en langue ou en littérature françaises. Etude systématique des habitudes articulatoires du français en comparaison avec celles de l'anglais. Introduction aux principes de l'analyse phonologique; groupes consonantiques possibles ou impossibles dans les deux langues. Etude de l'aspect physiologique de la parole;

propriétés des voyelles et des consonnes en français. Etude des phénomènes prosodiques: intonation, rythme, accent. Aperçu de la phonétique acoustique et expérimentale. (3 crédits) *NOTE A/See § 200.1*

FRANÇAIS S314
Stylistique comparée et traduction

Préalable: Français S214 ou, pour les étudiants dont la langue maternelle est le français, 6 crédits en langue ou en littérature française. Etude des ressources stylistiques du français par rapport à celles de l'anglais. Le passage entre les deux langues est étudié en fonction des tendances fondamentales de chaque langue, tant du point de vue grammatical et lexical que du point de vue du contexte culturel. Au cours de l'année, les étudiants doivent faire des exercices de stylistique comparée, des traductions de textes, soit vers le français, soit vers l'anglais et des analyses de traductions littéraires. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S321
Panorama de la littérature française

Préalable: Français S214. Aucun préalable n'est exigé pour les étudiants qui ont fait leurs études en français. Ce cours s'adresse aux étudiants qui ont choisi la littérature française comme domaine de spécialisation principale ou secondaire. A côté d'un aperçu général de l'évolution de la littérature française des origines à nos jours, ce cours comprend une initiation aux techniques des études littéraires: principes de la versification, dissertation, explication de texte, etc . . . Les travaux doivent être rédigés en français. (6 crédits) *NOTE: A/See § 200.1*
Nous recommandons aux étudiants de suivre ce cours en même temps que le français S214

FRANÇAIS S331
Littérature et culture québécoises

Préalable: Français S211 ou 211. Ce cours offre un aperçu général de l'histoire — politique, économique, sociale et culturelle — du Québec, toile de fond de la production littéraire; il analyse les courants nouveaux nés du processus de décolonisation et leurs reflets dans l'expression littéraire. (6 crédits) *NOTE A/See § 200.1. NOTE: Les étudiants inscrits au programme d'études canadiennes peuvent suivre ce cours avec crédits.*

FRANÇAIS S381
Méthodologie de l'enseignement du français

Préalable: Français S214 ou équivalent, et une certaine expérience de l'enseignement du français, ou l'autorisation du département. Le premier semestre est consacré à l'analyse des problèmes théoriques de l'enseignement du français, langue seconde. Le mécanisme de l'interférence dans les domaines de la phonétique, de la morphologie et de la syntaxe est étudié ainsi que les questions d'ordre psychologique telles que la motivation et les "lois" de l'apprentissage. Le deuxième semestre est réservé à l'examen de diverses méthodes avec démonstration, classes modèles, etc. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S410
Composition avancée (II) et stylistique

Préalable: Français S310. Le cours se divise en trois parties: l'analyse stylistique proprement dite (définitions et procédés du style); une étude des grands genres littéraires et de leur évolution; des exercices commentés et critiqués de "creative writing". Selon leurs rapports, ces trois aspects du cours seront examinés parallèlement. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S415
Traduction avancée

Préalable: Français S314 ou autorisation du département. Analyse approfondie de procédés stylistiques du français et de l'anglais. Etude des problèmes posés par les niveaux de langue et l'expression individuelle des auteurs. Travaux personnels et recherches en groupes. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S416
Grammaire Normative Avancée

Préalable: Français S310 au préalable ou en même temps, ou permission du département. Ce cours a pour but d'asseoir définitivement les connaissances grammaticales pratiques des étudiants, en particulier de ceux qui envisagent de poursuivre leurs études de français à un niveau supérieur. La norme étudiée dans ce cours tiendra compte à la fois des principes de la grammaire traditionnelle et des progrès récents dans l'étude da la langue. La terminologie en usage sera conforme aux définitions les plus récentes. L'étude des unités d'expression mènera, à travers des exercices pratiques d'analyse fonctionnelle, à l'examen approfondi de certains points de stylistique. (3 crédits) *NOTE A/See § 200.1*

FRANÇAIS S417
Linguistique structurale du français contemporain

Préalable: Français S310 ou l'autorisation du département. Analyse descriptive de la structure linguistique du français contemporain. Etude des aspects phonémiques, morphosyntaxiques et lexicaux de la langue considérés comme un système. Applications théoriques et pratiques. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S418
Phonétique expérimental

Préalable: Français S313. Séminaire de recherche expérimentale. Initiation à l'utilisation des instruments de recherche. Etude détaillée de segments linguistiques du point de vue du timbre des voyelles, de l'articulation des consonnes et des faits prosodiques (accent, rythme, intonation). Etude expérimentale de problèmes relevant de la comparaison des systèmes phonétiques du français et de l'anglais. (3 crédits) *NOTE A/See § 200.1*

FRANÇAIS S419
La langue française au Québec: son histoire et son état actuel

Préalable: Français S331; cours à suivre préalablement ou concurremment: Français S417. Aperçus de l'évolution du français sur le territoire québécois. Influences internes et externes. Etude des rapports entre l'évolution politique et économique du Québec et celle de la langue par la consultation de documents

provenant d'époques successives. Cette étude conduit à une analyse des aspects phonétique, lexical, et morphosyntaxique du français québécois actuel et des divergences de ce dernier par rapport à la norme européenne: archaïsmes, anglicismes, créations nouvelles. La question des niveaux, de langue (aspects sociaux et linguistiques) et celle de la norme seront également abordées. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S420
Littérature français du Moyen Age

Préalables: Deux cours parmi les suivants: Français S214, S241, S310, S314, S321. Ce cours se propose de présenter à l'étudiant et de lui faire apprécier les richesses littéraires du Moyen Age français, du Serment de Strasbourg aux poèmes de François Villon. (6 credits) *NOTE A/See § 200.1*

FRANÇAIS S421
Littérature française de la Renaissance

Préalables: Deux cours parmi les suivants: Français S214, S310, S314, S321. Etude des conditions de la Renaissance française (temps et lieux; forces en jeu; transmissions et contacts). Trois écrivains sont approfondis en raison de leur place et de leur rôle dans l'actualité de leur de leur siècle et de leur importance spécifique: le conteur (Rabelais), le poète (Ronsard), le moraliste (Montaigne). La mythologie et le baroque sont étudiés comme signes de deux "renaissances" différentes, voire concurrentes. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S422
Le XVIIème siècle

Préalables. Deux cours parmi les suivants: Français S214, S241, S310, S314, S321. Cette étude du XVIIème siècle comporte une introduction historique et l'analyse des idées héritées des siècles précédents et de celles qui apparaissent et se développent au cours du XVIIème siècle. Les différents genres littéraires sont ensuite envisagés successivement: le théâtre, le roman, la poésie lyrique, les essais. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S423
Littérature français du XVIIIème siècle

Préalables: Deux cours parmi les suivants: Français S214, S241, S310, S314, S321. Après une introduction détaillée sur les modifications que subit la vie littéraire après le "Siècle de Louis XIV" ce cours tend d'abord à préciser les concepts-clefs du XVIIIème siècle pour établir les supports historiques et philosophiques de la période. Les écrivains importants, de Prévost à Rousseau, sont ensuite étudiés dans l'ordre chronologique. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S424 (424)
La littérature du XXème siècle I

Préalables: Deux cours parmi les suivants: Français S214, S241, S310, S314, S321. Ce cours débute par une analyse sommaire des facteurs historiques, économiques, sociaux et artistiques qui ont caractérisé la "Belle Epoque", distingue, pendant cette période, la littérature en vogue de celle qui préparait le renouveau littéraire de l'entre-deux-guerres; analyse particulièrement l'oeuvre de Péguy, Claudel, Proust, Gide et Apollinaire. Après un bref aperçu sur la guerre de 1914-1918 et ses conséquences, il se termine par une étude des mouvements dadaïste et surréaliste. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S426
La littérature du XXème siècle II

Préalables: Deux cours parmi les suivants: Français S214, S241, S310, S314, S321. Après une brève analyse des conséquences de la première guerre mondiale sur le plan social, politique et artistique, sont étudiées par genre (roman et théâtre) les oeuvres des principaux écrivains français, de 1920 à nos jours. Sont particulièrement étudiés Bernanos, Malraux, St-Exupéry, Camus, Anouilh, Montherlant, Sartre, Giraudoux, Ionesco et Robbe-Grillet. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S427
Le Romantisme

Préalables: Deux cours parmi les suivants: Français S214, S241, S310, S314, S321. Le cours étudie le mouvement romantique européen et son expression française. Il aborde les questions suivantes: Pourquoi le mouvement apparaît-il en France une génération plus tard qu'en Allemagne et en Angleterre? La révolution française est-elle classique ou romantique? Les Romantiques sont-ils conservateurs ou révolutionnaires? Les caractères, thèmes, limites et réussites propres au Romantisme français sont étudiés dans les oeuvres de Chateaubriand, Lamartine, Vigny, Hugo et Musset. (3 crédits) *NOTE A/See § 200.1*

FRANÇAIS S428
Le roman à l'époque romantique

Préalables: Deux cours parmi les suivants: Français S214, S241, S310, S314, S321. On étudiera dans trois romans écrits autour de 1830 l'invention et le développement des techniques réalistes propres à exposer les problèmes éthiques, politiques et sociaux d'une société en train de devenir la société industrielle contemporaine. (3 crédits) *NOTE A/See § 200.1*

FRANÇAIS S429
La littérature française de 1857 à 1914

Préalables: Deux cours parmi les suivants: Français S214, S241, S310, S314, S321, ou inscription au majeur en traduction. L'éclatement du romantisme; le triomphe de la philosophie positive: le Réalisme; la revanche de l'esthétisme, de l'irrationnel: l'art pour l'art, le Symbolisme. La poésie: Baudelaire, le Symbolisme. Le roman: Flaubert, Zola. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S431
Le roman québécois contemporain

Préalable: Français S331. Etude des romanciers les plus importants du Québec: Aquin, Bessette, Blais, Ducharme, Hébert, Langevin, Roy; leur vision du monde; leur manière de se rattacher aux courants littéraires de notre époque; leurs conceptions littéraires. (6 crédits) *NOTE A/See § 200.1.*

NOTE: Les étudiants inscrits au programme d'études canadiennes peuvent suivre ce cours avec crédits.

FRANÇAIS S432
La poésie québécoise contemporaine

Préalable: Français S331. Etude des poètes les plus importants du Québec: Chamberland, Duguay, Hébert, Giguère, Godin, Grandbois, Lasnier, Miron, Nelligan, Saint-Denys-Garneau; leurs thèmes; leur vision du monde. (6 crédits) *NOTE A/See § 200.1.*
NOTE: Les étudiants inscrits au programme d'études canadiennes peuvent suivre ce cours avec crédits.

FRANÇAIS S440
Terminologie

Préalable: Français S214. Introduction aux problèmes lexicographiques. Le cours identifie les problèmes rencontrés dans la traduction et comprend des travaux pratiques, tels que l'analyse lexicographique d'articles de journaux ou de revues, et la préparation de glossaires sur fiches. (3 crédits) *NOTE A/See § 200.1*

FRANÇAIS S441
Méthodologie

Préalable: Français S214. Le cours porte sur les problèmes de traduction relevant des niveaux de langue. Des conférences initient les étudiants aux problèmes des stylistiques anglaise et française posés par la rédaction de textes particuliers: procès-verbaux, rapports administratifs. (3 crédits) *NOTE A/See § 200.1*

FRANÇAIS S442
Adaptation publicitaire et traduction commerciale

Préalable: Français S214. Le cours initie les étudiants aux problèmes d'adaptation de textes publicitaires d'une langue à l'autre. A partir d'exemples empruntés à la publicité écrite, radiophonique ou télévisée, les étudiants seront amenés à se familiariser avec les modifications linguistiques, affectives et sociales inhérentes au travail d'adaptation. (3 crédits) *NOTE A/See § 200.1*

FRANÇAIS S443
Histoire de la traduction

Préalable: Français S214. Etude de textes et de traductions d'auteurs français et anglais. On étudiera l'évolution des styles et des attitudes, de la Renaissance jusqu'à l'époque moderne. (3 crédits) *NOTE A/See § 200.1*

FRANÇAIS S461
Le cinéma français

Préalable: Français S211 ou l'autorisation du département. Aucun préalable n'est exigé des étudiants qui ont fait leurs études secondaires en français. Ce cours, abondamment illustré de films ou d'extraits de films, retrace en tout ou en partie, l'histoire du septième art dans ses manifestations les plus originales et les plus caractéristiques. Cours et laboratoire (visionnements hebdomadaires). (6 crédits) *NOTE C/See § 200.1*

FRANÇAIS S462
Le théâtre français

Préalable: Français S321 ou Français S214 et Français S241 ou l'autorisation du département. Ce cours étudie l'histoire du théâtre en France depuis le drame liturgique du Moyen Age jusqu'à l'anti-théâtre du XXème siècle; textes et aspects scéniques ne sont pas dissociés. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S463
Le cinéma français

Préalable: L'autorisation du département. Tout étudiant s'inscrivant pour la seconde fois au cours de cinéma S461 obtient les crédits S463. (6 crédits) *NOTE A/See § 200.1*

FRANÇAIS S465
Théâtre québécois

Préalable: Français S331. Etude du théâtre québécois à partir de 1945. Analyse des pièces les plus importantes pour en dégager les lignes de force et établir leurs relations avec le contexte social du Québec contemporain. (3 crédits) *NOTE A/See § 200.1.*
NOTE: Les étudiants inscrits au programme d'études canadiennes peuvent suivre ce cours avec crédits.

FRANÇAIS S466
Etude d'un sujet spécial dans le domaine québécois

Préalable: Français S331. Le cours porte sur un sujet spécial dans le domaine de la langue et de la littérature québécoises; les sujets seront, par exemple: les périodiques littéraires en français au Québec de 1950 à nos jours, l'Ecole littéraire de Montréal, les contes et nouvelles dans la littérature québécoise, la critique littéraire au Québec, et la littérature canadienne comparée. La matière du cours sera à fixer chaque fois selon les besoins et possibilités du Département. (3 crédits) *NOTE C/See § 200.1*

FRANÇAIS S467
Etude d'un sujet particulier

Préalable: 6 crédits et autorisation du département. Etude d'un sujet particuler dans le domaine de la langue ou de la littérature d'expression française. (3 crédits) *NOTE C/See § 200.1*

FRANÇAIS S491
Etude avancée d'un sujet particulier

Préalables: Français S321, douze crédits en littérature française dont six au moins au niveau '400', ou l'autorisation du département. Ce cours n'est ouvert qu'aux étudiants des programmes *major* ou *honours.* Il offre l'occasion d'approfondir l'étude d'un sujet à déterminer par l'étudiant en accord avec son conseiller et/ou un professeur du département. Chaque étudiant exécute des travaux individuels sous le contrôle du professeur spécialiste de la matière. (6 crédits) *NOTE C/See § 200.1*

FRANÇAIS S492
Etude avancée d'un sujet particulier

Préalable: Français S491 et l'autorisation du département. Tout étudiant s'inscrivant pour la seconde fois au cours S491 obtient les crédits S492. (6 crédits) *NOTE A/See § 200.1*

41.11 Mathematics (Faculty of Science, SGW)

41.11.1 PROGRAMMES

Students who follow Mathematics Programmes must register with the Department of Mathematics by Nov. 1st of each year.

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 41.3

The superscript indicates credit value.

72 Honours in Mathematics

Year I
24 Math N-241[6], N-261[6], N-281[6], N-292[6]
Year II
21 Math N-361[6], N-366[3], N-372[3], N-373[3], N-381[3], N-391[3]
Year III
15 Math N-461[6], N-466[3], N-491[3], N-467[3] or N-492[3]
Years II and III
12 Chosen from Math N-311[3], N-312[3], N-321[3], N-322[3], N-331[6], N-351[3], N-392[3], N-431[6], N-432[3], N-433[3], N-451[3], N-471[3], N-475[3], N-499[3], courses in related fields with prior Departmental approval.

72 Honours in Applied Mathematics

Year I
24 Math N-241[6], N-261[6], N-281[6], N-292[6]
Year II
24 Math N-311[3], N-351[3], N-361[6], N-372[3], N-373[3]
Option A: N-331[6]
Option B: N-312[3], N-366[3]
Year III
24 Math N-433[3], N-434[3]
Option A: N-312[3], N-431[6], N-432[3], six credits approved by Department
Option B: N-353[3], N-472[3], N-473[3], N-474[3], N-461[6]

NOTE: Students interested in Operations Research will take Option A, while those interested in Control Theory will choose Option B.

72 Honours in Statistics

Year I
24 Math N-241[6], N-261[6], N-281[6], N-292[6]
Year II
21 Math N-351[3], N-352[3], N-361[6], N-366[3], N-372[3], N-381[3]
Year III
12 Math N-451[3], N-452[3], N-461[6]
15 Elective credits in Mathematics or related fields with prior Departmental approval.

60 Specialization in Applied Mathematics

36 Math N-241[6], N-261[6], N-281[6], N-292[6], N-311[3], N-351[3], N-361[6]
6 Chosen From Math N-270[6], N-372[3], N-373[3],
18 Chosen From Math N-312[3], N-331[6], N-341[3], N-353[3], N-354[3], N-366[3], N-381[3], N-431[6], N-432[3], N-433[3], N-434[3], N-442[3], N-471[3], N-472[3], N-473[3] with prior Departmental approval.

NOTE: It is recommended that students choose their electives in accordance with their interests, e.g.,
Operations research: N-312[3], N-331[6], N-431[6], and one of: N-432[3], N-433[3], N-434[3]
Control theory: N-353[3], N-366[3], N-433[3], N-434[3], N-472[3], N-473[3]
Industrial applications: N-312[3], N-331[6], N-341[3], N-353[3], N-442[3]

60 Specialization in Mathematics

51 Math N-241[6], N-261[6], N-281[6], N-292[6], N-361[6], N-366[3], N-372[3], N-373[3], N-381[3], N-391[3], N-466[3], N-491[3]
9 Elective credits in Mathematics or related fields with prior Departmental approval.

60 Specialization in Statistics

42 Math N-241[6], N-261[6], N-281[6], N-290[3], N-312[3], N-341[3], N-343[3], N-351[3], N-352[3], N-372[3], N-441[3]
18 Chosen from N-291[3], N-331[6], N-342[3], N-353[3], N-354[3], N-361[6], N-431[6], N-442[3], N-451[3], N-452[3] (with prior Departmental approval).

42 Major in Applied Mathematics

30 Math N-241[6], N-261[6], N-270[6], N-281[6], N-290[3], N-311[3]
12 Chosen from Math N-291[3], N-312[3], N-331[6], N-351[3], N-366[3] courses in related fields (with prior Departmental approval).

42 Major in Mathematics

36 Math N-241[6], N-261[6], N-281[6], N-292[6], N-361[6], N-366[3], N-372[3]
6 Chosen from Math N-373[3] N-381[3], N-391[3] (with prior Departmental approval).

42 Major in Statistics

36 Math N-241[6], N-261[6], N-281[6], N-290[3], N-341[3], N-343[3], N-351[3], N-352[3], N-372[3]
6 Chosen from Math N-312[3], N-342[3], N-353[3], N-441[3], N-442[3], N-451[3], N-452[3] (with prior Departmental approval).

30 Minor in Mathematics for Students in Arts

30 Credits approved jointly by the Department of Mathematics and the Department in the Faculty of Arts in which the student follows the remainder of his programme. At least 18 credits must be at the level of Math N-241 and above.

NOTE: Arts students are also eligible for a regular Minor in Mathematics or Statistics provided they have the necessary prerequisite. See § 91.12.1.

41.11.2 COURSE DESCRIPTIONS

The courses in Mathematics described below may be taken by students registered in the Faculty of Arts only; for other courses in Mathematics students should consult § 91.12.4.

All courses in Mathematics may be regarded as courses in the Humanities.

MATHEMATICS N-200
Fundamental Concepts of Algebra

This is a course designed for mature students who need a modern background for Mathematics 101. Sets, axiomatics, algebraic techniques, inequalities, analytic geometry of lines, circles, parabolas. (3 credits) *NOTE A/See § 200.4*

NOTE: Students who have credit for Math N-201 or equivalent may not take this course for credits.

MATHEMATICS N-201
Elementary Functions

Sets. Field of real numbers. Inequalities. Functions and graphs. Trigonometric, exponential and logarithmic functions. (3 credits) *NOTE A/See § 200.4*

MATHEMATICS N-202
College Algebra

Prerequisite: Mathematics N-201 or equivalent previously or concurrently. Proofs and implications. The Natural numbers and the integers. Mathematical induction. Divisibility, the Euclidean Algorithm, primes, the Fundamental Theorem of Arithmetic. Sequences and progressions. Complex numbers, polynomials, the Fundamental Theorem of Algebra. Combinatorial Mathematics, the Binomial Theorem. Systems of equations, determinants, Cramers' Rule. (3 credits) *NOTE A/See § 200.4*

MATHEMATICS N-203
Differential and Integral Calculus I

Prerequisite: Mathematics N-201 or equivalent. Functional notation. Differentiation of polynomials. The power, product, quotient and chain rules. Differentiation of elementary functions. Implicit differentiation. Higher derivatives. Maxima and minima. Applications: tangents to plane curves, graphing, related rates. Approximations using the differential. Antiderivatives, definite integrals, area. (3 credits) *NOTE A/See § 200.4*

MATHEMATICS N-204
Vector Analysis and Analytical Geometry

Prerequisite: Mathematics N-201 or equivalent. Inner and cross products of vectors. Algebraic and vector equations of curves in the plane and in space. Elementary study of surfaces in space. Curves and surfaces in parametric form. Polar, spherical and cylindrical coordinates. (3 credits) *NOTE A/See § 200.4*

MATHEMATICS N-205
Differential and Integral Calculus II

Prerequisite: Mathematics N-203. Integration of trigonometric and exponential functions. Techniques of integration: substitutions, integration by parts, partial fractions. Improper integrals. Physical applications of the definite integral. Infinite series: tests for convergence. Power series, Taylor's theorem. (3 credits) *NOTE A/See § 200.4*

MATHEMATICS N-206
Linear Algebra for the Social Sciences

Prerequisite: Mathematics N-202. Operations on Matrices. Determinants. Cramers' Rule. Systems, rank. The inverse matrix. The Gauss Jordan Method, Mappings, matrix transformation, Linear Transformations, Characteristic Values, vectors, quadratic forms. (3 credits) *Students with credit for Math N-281 or equivalent may not take this course for credits.*
NOTE A/See § 200.4

MATHEMATICS N-207
Statistics for the Social Sciences

Prerequisite: Mathematics N-201 or equivalent, or permission of Department of Mathematics or Economics. Elementary probability, permutations and combinations, binomial and normal distribution. Analysis and organization of statistical data. Tests of hypotheses. Confidence limits. Introduction into linear regression and correlation. (3 credits) *Students with credit for Math N-241 or equivalent may not take this course for credits. NOTE A/See § 200.4 NOTE: This course may be taken for credits in the Urban Studies Programme.*

MATHEMATICS N-208
Fundamental Mathematics I

Prerequisite: Mathematics N-201 or equivalent. This course is intended primarily for pre-Commerce students. Progressions, compound interest, annuities; permutations, combinations and binomial theorem; systems of linear equations, inequalities, linear programming; matrices. (3 credits) *NOTE A/See § 200.4*

MATHEMATICS N-209
Fundamental Mathematics II

Prerequisite: Mathematics N-201 or equivalent. This course is intended primarily for pre-Commerce students. Limits, differentiation of rational, exponential and logarithmic functions, theory of maxima and minima, integration. (3 credits) *NOTE A/See § 200.4*

The following courses are available only to practising teachers.

MATHEMATICS N-300[6], N-301[6], N-302[6], N-303[6], N-304[6], N-305[6], N-307[3], N-309[3], N-400[3], N-401[6], N-402[3], N-403[3], N-404[6], N-405[3], N-406[3], N-407[6], N-408[3], N-409[3], N-410[3]

Descriptions of the above courses are listed in the Sir George Williams Faculty of Science § 91.12.4.

NOTE: Certificate programmes in Mathematics for Elementary Teachers and Junior Secondary Teachers are available for practising teachers. The description of these programmes can be found in § 91.12.2 and § 91.12.3.

41.12 Department of Philosophy

Professor and Chairman of the Department
DALLAS LASKEY

Professors
ROGER ANGEL
STANLEY FRENCH

Associate Professors
MOBIN AHMAD
CHRISTINE ALLEN
JACK ORNSTEIN
VLADIMIR ZEMAN

Assistant Professor
SHEILA MULLETT

41.12.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 41.3

The superscript indicates credit value.

72 BA Honours in Education and Philosophy

Year I
9 Ed S210[6], S230[3]
12 Phil S210[6] or S211[6]; Phil S221[6] or S231[6]
Year II
6 Ed S430[6]
6 Phil S380[6]
6 Chosen from Ed S421[6], S441[6], S451[6]
6 Chosen from Phil S231[6], S368[3], S378[3], S431[6]
Year II
6 Ed S480[6]
6 Phil Elective credits at '400' level (excluding Phil S493[6], S495[6])
3-6 Chosen from Ed S490[3], S491[3], S492[3], S493[6]
6 Phil S369[6]
Year II or III
3-6 Chosen from Ed S415[3], S416[3], S417[3]

60 BA Honours in Philosophy

Year I
6 Phil S211[6]
6 Chosen from Phil S210[6], S221[6], S231[6], N-273[6]
Year II
6 Chosen from Phil S221[6], S321[6]
6 Phil S380[6]
6 Chosen from Phil S301[6], S333[6]
6 Phil Elective credits
Year III
6 Phil S405[6]
6 Chosen from Phil S369[6], S421[6]
6 Chosen from Phil S407[6], S409[6], S431[6]
6 Phil Elective credits at '300' or '400' level

**Students preparing for graduate work should acquire a good reading knowledge of a related modern language.*

72 BA Honours in English and Philosophy

18 Chosen from Engl S333[6], S334[6], S335[6], S336[6], S337[6], S374[6], S375[6], S487[6]
18 Chosen from Engl S231[3], S232[3], S244[6], S344[6], S348[6], S351[6], S353[6], S356[6], S363[6], S367[6], S376[6], S430[6], S448[3], S456[3], S459[6], S460[6], S466[6], S476[6]
6 Chosen from Phil S210[6], S211[6] or, if exempted, Phil Elective credits
6 Phil S380[6]
6 Chosen from Phil S221[6], S321[6], S369[6]
6 Chosen from Phil S231[6], S271[6], S273[6], S301[6], S361[6], S369[6], S372[3], S374[3], S376[3], S378[3]
6 Chosen from Phil S369[6], S405[6]
6 Chosen from Phil S321[6], S333[6], S365[6], S396[3], S405[6], S407[6], S431[6], S493[6]; Wom St S241[3], S242[3]

66 BA Honours in Philosophy and History

Year I
6 Hist S210[6]
6 Phil S211[6]
Year II
6 Hist S390[6]
12* Chosen from Hist S333[6], S335[6], S336[6]
6 Phil S380[6]
6 Chosen from Phil S301[6], S333[6]
Year III
6 Hist S490[6]
6 Chosen from Phil S405[6], S407[6]
6 Hist Elective credits at '400' level (in

consultation with Departmental Honours adviser)
6 Phil Elective credits at '300' or '400' level (in consultation with Departmental Honours Adviser)

Six of these credits may be taken in Year III.

72 BA Honours in Philosophy and Relgion

12 Chosen from Rel S211[6], S213[6], S301[3], S302[3]
6 Rel S443[6]
6 Chosen from Rel S363[6], S364[6]
6 Chosen from Rel S361[6], S362[6], S465[6]
6 Chosen from Rel S311[6], S312[6], S313[6], S326[3], S327[3], S328[3], S491[6], S492[6]
6 Phil S210[6] or, if exempted, Phil Elective credits
6 Phil S380[6]
6 Chosen from Phil S221[6], S321[6], S369[6]
6 Chosen from Phil S369[6], S405[6]
6 Chosen from Phil S231[6], S271[6], S273[6], S301[6], S361[6], S365[6], S369[6], S372[3], S374[3], S376[3], S378[3]
6 Chosen from Phil S321[6], S333[6], S365[6], S396[3], S405[6], S407[6], S431[6], S493[6]

69 BA Honours in Sociology and Philosophy

Pattern A: (Epistemology and Methodology)
6 Soc S210[6] or, if exempted, Soc Elective credits (in consultation with Departmental Honours Adviser)
6 Chosen from Soc S241[6], S310[6]
18 Soc S330[6], S422[6], S481[6]
6 Chosen from Soc S420[6], or Soc S436[3], S437[3], S438[3], S439[3]
6 Chosen from Phil S210[6], S211[6], S221[6], or, if exempted, Phil Elective credits
6 Phil S380[6]
6 Chosen from Phil S221[6], S321[6]
6 Chosen from Phil S369[6], S405[6]
3 Chosen from Phil S372[3], S374[3], S376[3]
6 Chosen from Phil S321[6], S333[6], S369[6], S405[6], S409[6], S421[6], S493[6]

72 BA Honours in Sociology and Philosophy

Pattern B: (Man in Society)
6 Soc S210[6] or, if exempted, Soc Elective credits (in consultation with Departmental Honours Adviser)
6 Anth S211[6] or, if exempted, Anth Elective credits (in consultation with Departmental Honours Adviser)
6 Chosen from Soc S310[6], S330[6]
12 Soc S420[6], S481[6]
6 Chosen from Soc S421[6], S422[6], S442[6], S443[6], S444[3], S445[3], S446[6], S447[6], S454[6]
18 Phil S210[6], Phil S231[6], Phil S380[6] or, if exempted, Phil Elective credits
6 Chosen from Phil S221[6], S321[6], S369[6]
6 Chosen from Phil S372[3], S374[3], S376[3], S378[3]
6 Phil Elective credits at the '300' or '400' level

42 BA Major in Philosophy

Year I
6 Chosen from Phil S210[6], S211[6]
6 Chosen from Phil S221[6], S231[6], S273[6]
Year II
6 Phil S301[6] or S333[6]
6 Phil Elective credits at '300' or '400' level
6 Phil Elective credits
Year III
6 Chosen from Phil S369[6], S405[6], S409[6]
6 Phil Elective credits at '300' or '400' level

48 BA Major in Political Philosophy

18 Pol Sc S311[6], S320[6], S413[6]
6 Chosen from Phil S210[6], S211[6]
24 Chosen from Phil S333[6], S369[6], S372[3], S374[3], S376[3], S407[6]; Pol Sc S415[6]; Soc S430[6]

30 Minor in Philosophy

12 Chosen from Phil S210[6], S211[6], S221[6], S321[6], S369[6], S405[6]
18 Chosen from Phil S301[6], S321[6], S333[6], S369[6], S396[6], S405[6], S407[6], S431[6], S493[3], S495[6]

41.12.2 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1.

PHILOSOPHY S210
Problems of Philosophy
A survey of selected philosophical problems in which both contemporary and traditional approaches are critically examined. Specimen topics include: philosophical method, the existence of God, the mind-body problem, freedom and determinism, moral and political obligation. (6 credits) *NOTE A/See § 200.1*

PHILOSOPHY S211
Philosophical Classics
A critical discussion of selected philosophical classics. Readings will be chosen from Plato, Aristotle, Descartes, Hume, Kant and one recent or contemporary philosopher. (6 credits) *NOTE A/See § 200.1*

PHILOSOPHY S214
Philosophical Classics I

Students entering the University in January may join Philosophy S211 at that time by registering in Philosophy S214. Tutorials and conferences will be arranged. Such students may complete the equivalent of Philosophy S211 by enrolling in Philosophy S215. (3 credits) *NOTE A/See § 200.1*

PHILOSOPHY S215
Philosophical Classics II

Prerequisite: Philosophy S214. The subject matter in this course is the same as that taught in the first semester of Philosophy S211. Students with credits for Philosophy S214 may complete the equivalent of Philosophy S211 by enrolling in Philosophy S215. (3 credits) *NOTE A/See § 200.1*

PHILOSOPHY S221
Introduction to Logic

This course introduces the student to the nature and function of formal logic through an examination of both syllogistic logic and immediate inference. In addition there will be an extensive treatment of informal or material fallacies and an elementary presentation of propositional logic. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Science and Human Affairs Programme.

PHILOSOPHY S231
Problems of Morals

An introduction to theoretical and applied ethics. In this course, attention will be given to the history of ethical thought and to discussion of contemporary problems. (6 credits) *NOTE A/See § 200.1*

PHILOSOPHY S271
Contemporary Philosophy

Prerequisite: Second year standing. A selected study of selected 20th-century philosophers. Movements and figures discussed vary from year to year. Specimen topics include pragmatism, positivism, existentialism, linguistic analysis, phenomenology, structuralism: Russell, Moore, Whitehead, Dewey, Wittgenstein, Husserl, Heidegger, Jaspers. (6 credits) *NOTE A/See § 200.1*

PHILOSOPHY S273
Existentialism

A course designed to acquaint the student with the fundamentals of the existentialist movement as a philosophical perspective. Among philosophers considered will be Kierkegaard, Nietzsche, Heidegger, Sartre, Merleau-Ponty, Jaspers, Marcel and Berdyaev. (6 credits) *NOTE A/See § 200.1*

PHILOSOPHY-INTERDISCIPLINARY STUDIES 281
Introduction to General Systems Theory

An elementary survey of the transdisciplinary general systems approach. Such basic concepts as, structure information and regulation will be explored and a teleological framework suited to the social and behavioural sciences will be developed. (6 credits) *NOTE A/See § 200.1.*
NOTE: This course may be taken for credits in the Science and Human Affairs Programme.

PHILOSOPHY S301
Greek Philosophy

A survey of the principal developments from the Presocratics (600 B.C.) to Plotinus (250 A.D.). Primary emphasis will be placed on the critical reading of selected original sources. Most of the time will be devoted to Plato and Aristotle. (6 credits) *NOTE A/See § 200.1*

PHILOSOPHY S321
Modern Logic

An introduction to modern logic, its techniques and applications. Coverage of sentential logic, first order predicate logic, naive set theory, relations and functions. (6 credits) *NOTE A/See § 200.1*

PHILOSOPHY S333
Rationalism and Empiricism

Prerequisite: Six credits in Philosophy or permission of the Department. A survey of the Rationalist and Empiricist traditions of the 17th and 18th centuries with particular reference to such central figures as Descartes, Spinoza, Leibniz, Locke, Berkeley and Hume. Special attention will be given to the contributions these thinkers made to such issues as the following: the sources, justification and limits of knowledge; mind and body; freedom and determinism; the status of the concepts of substance, the self, God and causality. (6 credits) *NOTE A/See § 200.1*

PHILOSOPHY S361
Philosophical Ideas in Literature

Prerequisite: Second year standing or permission of the instructor. A critical examination of philosophical ideas as expressed in various literary works. The subject matter is chosen for its relevance to such themes as the nature of man, the nature of the good life, and the relation of man to society. (6 credits) *NOTE A/See § 200.1*

PHILOSOPHY S365
Studies in Russian Philosophy

Prerequisite: Second year standing or permission of the Department. Study of the main topics in the development of Russian philosophy. Topics to be discussed include: Nihilism and Anarchism, Tolstoy's Philosophy of History, Dostoyevsky's idea of evil, Marxism. Lectures and seminars. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Russian Studies Programme.

PHILOSOPHY S368
Philosophical Psychology

A critical examination of the explanation of human behaviour and the self in the light of new developments in philosophy and psychology. Detailed studies of selected problems such as motives, intention, the concept of person, choice, reason, freedom, purpose and action. (3 credits) *NOTE A/See § 200.1*

PHILOSOPHY S369
Contemporary Analytic Philosophy

Prerequisite: Twelve credits in philosophy or permission of Department. A seminar devoted to the investigation of selected philosophical problems as they arise in the writings of such

philosophers as Moore, Russell, Ayer, Carnap, Quine, Wittgenstein, Ryle, Wisdom, Austin and others. (6 credits) *NOTE A/See § 200.1*

PHILOSOPHY S372
Political Philosophy

Prerequisite: Second year standing or permission of the Department. Critical analysis of contemporary political-philosophical concepts such as tolerance, violence, séparatisme, racism and the nationalism of visible minorities. (3 credits) *NOTE A/See § 200.1*

PHILOSOPHY S374
Law, Liberty and Human Rights

In this course the student will examine several perspectives from which the problem of the relation between law and morality may be treated. Conflicting concepts of law, morality and the relation of the individual to society will be discussed. The problem of authority will be examined in relation to issues of civil liberties, civil rights and the social basis of legal conflicts. (3 credits) *NOTE A/See § 200.1*

PHILOSOPHY S376
Philosophy of the Social Sciences

Philosophical examination of the structure and methodology of the social sciences. Special attention to problems of functionalism, teleological explanation and the testing of social theories. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Science and Human Affairs Programme.

PHILOSOPHY S378
Aesthetics

Prerequisite: Second year standing or permission of the Department. A philosophical analysis of selected aspects of the aesthetic experience and the logic of appraisal. Specimen topics include: perception in art, symbolic expression, the role of feeling and emotion in aesthetic judgment, objectivity and subjectivity of value judgments, commensurability of values. (3 credits) *NOTE A/See § 200.1*

PHILOSOPHY S380
Honours Seminar in Epistemology and Metaphysics

Prerequisite: Second year standing. Intensive study of major contemporary issues in the theory of knowledge and metaphysics, designed to accommodate honours students in any department. (6 credits) *NOTE A/See § 200.1*

PHILOSOPHY S396
The Study of a Given Thinker

Prerequisite: Six credits in Philosophy or permission of the Department. A detailed study of one or more of the central works of a major philosopher. When it is appropriate, some attention may be devoted to his philosophical development. (3 credits) *NOTE C/See § 200.1*

PHILOSOPHY S398
The Study of A Given Thinker

Prerequisite: Six credits in Philosophy or permission of the Department. A student repeating S396 registers under Philosophy S398. (3 credits) *NOTE A/See § 200.1*

PHILOSOPHY S405
Kant

Prerequisite: Twelve credits in Philosophy or permission of the Department. An intensive study of Kant's *Critique of Pure Reason* and related works. (6 credits) *NOTE A/See § 200.1*

PHILOSOPHY S407
Nineteenth-Century Philosophy

Prerequisite: Six credits in Philosophy or permission of the Department. An examination of some of the main currents of post-Kantian philosophy, Hegel and the post-Hegelians, the romantic reaction, positivism, and pragmatism. (6 credits) *NOTE A/See § 200.1*

PHILOSOPHY S409
Phenomenology

Prerequisite: Twelve credits in Philosophy or permission of the Department. Origins and development of phenomenology from Brentano and Meinong through the different stages of Husserl's writing. Post-Husserlian modifications will be considered briefly. The second term will be devoted to a discussion of the influence of the phenomenological movement on contemporary developments in the social sciences and humanities. Actual topics will be determined by the students' areas of interest and academic qualifications. (6 credits) *NOTE A/See § 200.1*

PHILOSOPHY S421
The Philosophy of Science

Prerequisite: One course in logic or permission of the Department. A critical examination of problems pertaining to the structure and status of scientific theories and the logic of scientific inference. Such topics as the following will be discussed: explanation, confirmation, verifiability and falsifiability, problems of definition, observational and theoretical terms, models and analogies. (6 credits) *NOTE A/See § 200.1.*
NOTE: This course may be taken for credits in the Science and Human Affairs Programme.

PHILOSOPHY S431
Recent Ethical Theory

Prerequisite: Six credits in Philosophy or permission of the Department. A critical analysis of leading contemporary ethical theories from Moore to the present. Special attention is given to the naturalistic fallacy, the reducibility of normative statements, ethical reasoning and the relation of ethics to psychology and sociology. (6 credits) *NOTE A/See § 200.1*

PHILOSOPHY S493
Special Topics in Philosophy

Prerequisite: Six credits in Philosophy or permission of the Department. Consideration of a special topic selected from the principal areas of philosophy, e.g. value theory, epistemology, metaphysics, philosophy of mind, philosophy of science, philosophical logic. (6 credits) *NOTE C/See § 200.1*

PHILOSOPHY S495
Special Topics in Philosophy

Prerequisites: Twelve credits in Philosophy or permission of the Department. A student repeating Philosophy S493 registers for credits under Philosophy S495. (6 credits) *NOTE A/See § 200.1*

41.13 Department of Religion

Professor and Chairman of the Department
CHARLES DAVIS

Professors
MICHEL DESPLAND
SHEILA McDONOUGH

Associate Professors
FREDERICK B. BIRD
DAVID MILLER
JOHN ROSSNER

Assistant Professors
JACK LIGHTSTONE
MICHAEL OPPENHEIM
ALTI RODAL

Visiting Assistant Professor
DENNIS LISHKA

Lecturer
HOWARD JOSEPH

41.13.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 41.3

The superscript indicates credit value.

60 BA Honours in Religion

6 Rel S211[6]
6 Rel S213[6] or S222[6]
12 from one of three areas of specialization:
- A. *Asian religions:* Chosen from Rel S311[6], S312[6], S313[6]
- B. *Christianity:* Chosen from Rel S301[3], S302[3], S361[6], S362[6], S363[6]
- C. *Judaism:* Chosen from Rel S301[3], S302[3], S325[3], S326[3], S327[3], S328[3], S329[3]

6 from courses specified in a second area above
6 Chosen from Rel S331[3], S332[3], S333[3], S334[3], S341[6], S364[6], S435[6], S443[6], S465[6]
6 Elective credits in chosen area of specialization at '400' level
6 Rel Elective credits at '300' or '400' level
12 Elective credits in Rel or related discipline (in consultation with Departmental Honours Adviser)

60 BA Honours in English and Religion

12 Engl S333[6], S430[6]
6 Engl S375[6] or S376[6]
12 Chosen from Engl S244[6], S334[6], S335[6], S336[6], S337[6], S348[6], S374[6], S375[6] or S376[6]
12 Rel S301[3], S302[3], S341[6]
6 Chosen from Rel S211[6], S213[6], S361[6], S362[6], S363[6]
6 Chosen from Rel S443[6], S465[6]
6 Chosen from Rel S311[6], S312[6], S313[6], S325[3], S326[3], S327[3], S328[3], S330[3], S361[6]

72 BA Honours in Philosophy and Religion

12 Chosen from Rel S211[6], S213[6], S301[3], S302[3]
6 Rel S443[6]
6 Chosen from Rel S363[6], S364[6]
6 Chosen from Rel S361[6], S362[6], S465[6]
6 Chosen from Rel S311[6], S312[6], S313[6], S326[3], S327[3], S328[3], S491[6], S492[6]
6 Chosen from Phil S210[6], S211[6] or, if exempted, Phil Elective credits
6 Phil S380[6]
6 Chosen from Phil S221[6], S321[6], S369[6]
6 Chosen from Phil S369[6], S405[6]
6 Chosen from Phil S231[6], S271[6], S273[6], S301[6], S361[6], S365[6], S369[6], S372[3], S374[3], S376[3], S378[3]
6 Phil S321[6], S333[3], S365[6], S396[3], S405[6], S407[6], S431[6], S493[6]

66 BA Honours in Religion and History

Pattern A (Asia)

30 Hist S210[6], S261[6], S361[6], S362[6], S390[6]
24 Rel S213[6], S311[6], S312[6], S313[6]
12 Soc* S210[6], S424[6]

NOTE:
(a) With the approval of the Honours representative, any 6 credits at '400' level in Hist or Rel may be substituted for any specific course.
(b) For students interested in the comparative aspects of Islamic development, Hist S365[6] is available.

Pattern B (Europe)

12 Hist S210[6], S390[6]
6 Chosen from Rel S211[6], S213[6]
42 Chosen from Hist S331[6], S332[6], S333[6], S336[6], S327[3], S328[3], S330[3]; Rel S361[6], S362[6], S443[6]; Soc* S210[6], S424[6]

**Students taking Soc S210 in Honours programme must also take Soc S424.*

60 BA Honours in Sociology and Religion

18 Anth S211[6], Rel S213[6], Soc S210[6] or, if exempted, Elective credits from the relevant department (in consultation with Departmental Honours Adviser)
6 Chosen from Rel S301[6], S302[6], S363[6]
12 Chosen from Rel S311[6], S312[6], S313[6], S326[3], S327[3], S328[3], S330[3], S361[6], S362[6]
12 Soc S310[6], S330[6]
6 Chosen from Soc S424[6], Anth S425[6]
6 Chosen from Soc S481[6], Rel S491[6]

NOTE: Students preparing for graduate work should acquire a good reading knowledge of French or another language (consult with the Department).

48 BA Major in Judaic Studies

6 Rel S201[6]
6 Chosen from Rel S211[6], S213[6]
21 Chosen from Rel S222[6], S301[3], S325[3], S326[3], S327[3], S328[3], S329[3], S330[3], S401[3], S497[3], S498[3]
6 Chosen from Rel S361[6], S362[6], S313[6]
9 Elective credits in related disciplines at '300' or '400' level (in consultation with Major Adviser)

42 BA Major in Religion

6 Chosen from Rel S211[6], S213[6], S311[6], S312[6], S313[6]
6 Chosen from Rel S222[6], S301[3], S302[3], S326[3], S327[3], S328[3], S329[3], S330[3], S361[6], S362[6], S363[6]
30 Rel Elective credits at '300' or '400' level

30 Minor in Judaic Studies

6 Rel S201[6]
18 Chosen from Rel S222[6], S301[3], S302[3], S326[3], S327[3], S328[3], S329[3], S330[3]
6 Chosen from Rel S401[3], S497[3], S498[3] or Elective credits at '400' level (in consultation with Major Adviser)

30 Minor in Religion

30 Rel Elective credits (in consultation with Departmental Adviser)

41.13.2 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1.

RELIGION S201
Classical Hebrew
A study of the language of the classical Hebrew texts. The course is designed as a preparation for reading the Hebrew Bible, but takes account of other texts. (6 credits) *NOTE A/See § 200.1*

RELIGION S211
Understanding Religion
A systematic and topical introduction to the study of religion. The purpose of the course is to enable the student to articulate and investigate questions about the meaning and nature of religion. Problems discussed will include the elements of religious experience, forms of religious expression and interpretation, religious communities and practices and the questions raised by the contemporary interfaith dialogue. Materials will be taken from a variety of religious traditions. (6 credits) *NOTE A/See § 200.1*

RELIGION S213
Major Religious Traditions of the World
A historical and comparative overview of the major religious traditions of the world: Judaism, Christianity, Islam, Hinduism, Buddhism and Chinese religions. The course will include some consideration of the new religions in North America. (6 credits) *NOTE A/See § 200.1*

RELIGION S222
Judaic Studies: History of the Jewish People
An historical survey of the Jewish people from the Biblical Age until the beginning of the modern period. The survey will focus on both the sociological and the intellectual developments in this area. The emphasis will be on the formation and continuation of the major Jewish

concepts, institutions, and traditions; on the dynamic forces in Jewish society and on the interrelationship between Jews and non-Jews during this period. (6 credits) *NOTE A/See § 200.1*

RELIGION S301
Biblical Studies I: The Hebrew Bible

An introduction to the methods and results of Biblical scholarship with regard to the history, culture and religion of Ancient Israel. Particular attention is given to the major religious affirmations and theological concepts of the Hebrew Bible which have become central in the subsequent development of Judaism. (3 credits) *NOTE A/See § 200.1*

RELIGION S302
Biblical Studies II: The New Testament

An introduction to the methods and results of contemporary New Testament scholarship; a critical survey of New Testament literature considering historical setting, history of text, religious and cultural significance. Attention is given to the central issues and concepts portrayed in the Synoptic, Johannine and Pauline writings and their importance in the subsequent development of the Western religious tradition. (3 credits) *NOTE A/See § 200.1*

RELIGION S311
The Religions of India, Ceylon, Southeast Asia

An historical study of the major religious traditions native to the Indian sub-continent, Ceylon and Southeast Asia. Although the course will concentrate upon the development of Hindu and Buddhist religious thought and institutions, consideration will be given to the influence of Jainism, Islam and Christianity upon Hinduism and Theravada Buddhism. The course will end with an analysis of the contemporary religious situation in India and Burma. (6 credits) *NOTE A/See § 200.1.*
NOTE: This course may be taken for credits in the Asian Studies Programme.

RELIGION S312
The Religions of China and Japan

Prerequisite: Second-year standing. An historical study of the religious traditions of premodern China, Tibet and Japan. After a brief introduction to the origin of Buddhism in India, the course will focus upon the development of religious thought and institutions in Mahayana Buddhism, Taoism, Confucianism and Shinto. The course will end with an analysis of the contemporary religious situation in China and Japan. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Asian Studies Programme.

RELIGION S313
Islam

A study of the rise and development of Islamic religion and culture, with special attention to mysticism and to modernism. (6 credits) *NOTE A/See § 200.1.*
NOTE: This course may be taken for credits in the Asian Studies Programme.

RELIGION S325
The Bible and the Ancient Near East

The significance of Old Testament Institutions within the context of the ancient Mediterranean world. Law, covenant, writing, historiography, the relationship between man and God, sin, sacrifice and atonements will be discussed. Readings from contemporary literature in translation (Babylonian, Egyptian, Greek, Hittite, Ugarite). (3 credits) *NOTE A/See § 200.1*

RELIGION S326
Classical Judaism

The concepts and institutions of classical or 'normative' Judaism, in the setting of the Hellenistic-Roman world. A conceptual approach to law, ethics, philosophy and culture of post-Biblical Judaism. Consideration will be given to sectarianism and sectarian movements (Samaritans, Dead Sea Scrolls) and their relationship to the major Jewish 'Schools' (Pharisees, Sadducees, Essenes) and to the early Christian Church. (3 credits) *NOTE A/See § 200.1*

RELIGION S327
Mediaeval Jewish Thought and Institutions

Topics in the intellectual, religious, and social history of selected Jewish communities during the Middle Ages. Both internal Jewish developments and changing Jewish relations with their non-Jewish neighbours will be considered. (3 credits) *NOTE A/See § 200.1*

RELIGION S328
Modern Jewish Thought and Institutions I (1780-1880)

A survey of the social and intellectual currents which have shaped Jewish modernism from the beginning of emancipation until 1880. Topics will include: the emergence of modern Jewish consciousness, Jewish pluralism and religious differentiation within Jewish society (Haskalah, Hasidism, science of Judaism, orthodoxy, reform and conservatism), secular versus religious values, disintegration and unification within the Jewish community. (3 credits) *NOTE A/See § 200.1*

RELIGION S329
Sefardic Judaism

A critical analysis of the religious traditions peculiar to Sefardic Jews. Particular attention will be given to North African Judaism. (3 credits) *NOTE A/See § 200.1*

RELIGION S330
Modern Jewish Thought and Institutions II (1880 to the present)

A survey of social and intellectual currents in Jewish society from 1880 until the present. Topics will include: the impact of anti-Semitism, particularism and universalism, nationalism and its critics, Jewish existentialism and the new mysticism (Rosenzweig, Buber, Rabbi Kook), reactions to the holocaust, and the relationship between Israel and the diaspora. (3 credits) *NOTE A/See § 200.1*

RELIGION S331
Contemporary Ethical Issues: Personal

This course will identify and analyse ethical issues arising at the personal level today. Issues will be discussed in the context of the inter-relationship between moral values and religious

convictions. Topics will vary from year to year, but some examples of areas that raise ethical and religious questions for personal existence are: affluence, alienation, work, leisure, aging, drugs. (3 credits) *NOTE A/See § 200.1*

RELIGION S332
Contemporary Ethical Issues: Societal

This course will identify and analyze ethical issues arising from social groups today. In discussing the issues, account will be taken of the bearing of religious institutions and traditions upon social attitudes and problems. Topics will vary from year to year, but examples of problem areas that have evoked ethical and religious debate are: economic and social inequality, race relations, violence and war, hunger and poverty, population growth. (3 credits) *NOTE A/See § 200.1*

RELIGION S333
Women and Religion I

An examination of the roles and images of women in the history of religions. Topics might include: the development of patriarchal religion, religion and sexuality, women and myth, the roles of women in different religious communities. This course will include an integrated sequence of lectures (minimum three weeks) by an anthropologist on matriarchal and patriarchal societies. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Women's Studies Programme.

RELIGION S334
Women and Religion II

An examination of the religious and ethical questions raised by contemporary discussions of women's experience. Topics might include: the recent beginnings of a feminist theology, the feminist critique of organized religion and society, the effects of male perspective upon philosophy and theology, and women in the ministry. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Women's Studies Programme.

RELIGION S341
Religion and Literature

This course deals with the questions raised for the study of religion by works of literature. An account will be given of the recent development of interdisciplinary studies in religion and literature and of the problems of method that have arisen. The relation between the interpretation of religious language, with its use of myth, parable, symbol and metaphor, and literary criticism will be explored. The religious implications, direct and indirect, of selected literary works will be discussed. (6 credits) *NOTE A/See § 200.1*

RELIGION S361
Studies in the History of Christian Thought

An introduction to the classics of Christian thought from the Fathers to the modern period. Authors studied at length may vary from year to year, but in any case students will acquire a basic knowledge of Augustine, Aquinas, Luther and Calvin. (6 credits) *NOTE A/See § 200.1*

RELIGION S362
Questions from the Christian Tradition

A study of some of the major religious questions and controversies in the history of the Christian West. The questions chosen will vary, but examples are: grace and free will, faith and reason, history and eschatology, church and state, contemplation and action. (6 credits) *NOTE A/See § 200.1*

RELIGION S363
Religion in Canada

The historical development of the major religious traditions in Canada, their influence on the social, political and cultural areas of Canadian life and their contemporary significance. Attention will also focus on the inter-action of Catholic, Protestant, Jewish, Indian and Eskimo groups. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

RELIGION S364
The Origin of Myth, Ritual and Magic in Western Culture

An historical study of the origins and development of esoteric beliefs and practices involving claims to paranormal spiritual and psychic powers or faculties of human beings. The course will survey the history of the so-called "magical" or "miraculous" elements in human religious experience from primitive to modern settings, through Egypt, India, Mesopotamia, Ancient Israel, Greece, and Rome, Early and Medieval Christianity, to the cults, sects, secret-societies and quasi-religious movements of the modern period. (6 credits) *NOTE A/See § 200.1*

RELIGION S401
Advanced Studies in Classical Jewish Texts

This course will be based on representative readings from Biblical, post-Biblical and mediaeval Hebrew literature. It will concentrate on specific topics and will pay attention to the historical and philosophical background of the texts. (3 credits) *NOTE A/See § 200.1*

RELIGION S435
Comparative Religious Ethics: West & East

This course will identify the ways in which different religious and ideological traditions from West and East consider and deal with ethical issues. Examples of such traditions are Navaho, Jewish, Christian, Islamic, Hindu, Buddist, Confucian, Humanist, Communist. The ethical values and ideals found in these traditions and their influence upon individual life patterns and social organization will be considered. (6 credits) *NOTE A/See § 200.1*

RELIGION S443
Modern Religious and Atheistic Thought

A historical and critical review of the conflicting philosophical interpretations of religion that have arisen in the West since the Enlightenment. Special attention will be paid to problems about the nature of meaning of religious experience currently debated between religious and secularist thinkers. (6 credits) *NOTE A/See § 200.1.*
NOTE: This course may be taken for credits in the Science and Human Affairs Programme.

RELIGION S465
Classical Images of Man and Contemporary Psychical Research

A survey of recent scientific studies of paranormal phenomena occurring in dreams,

visions, trance-states, hypnosis, and various ecstatic mystical experiences, the results of thanatological studies, the quest for postmortem survival evidence, and general research in parapsychology and paraphysics. The course will relate this body of research to the various root typologies of classical human religious experience found in primitive, ancient-sacral, and classical religious traditions of East and West. (6 credits) *NOTE A/See § 200.1*

RELIGION S491
Special Seminar I

Prerequisite: Permission of the Department. Subject matter will vary from year to year to take advantage of the special interests of the seminar leader. This course will provide opportunities to senior students for discussion and advanced study. (6 credits) *NOTE C/See § 200.1*

RELIGION S492
Special Seminar II

Prerequisite: Permission of the Department. A student repeating Religion S491 registers for credits under Religion S492. (6 credits) *NOTE A/See § 200.1*

RELIGION S493
Religious Institutions

Prerequisite: Permission of the Department. Seminar on a particular period or institution in the history of religion. (3 credits) *NOTE C/See § 200.1*

RELIGION S494
Religious Institutions

Prerequisite: Permission of the Department. A student repeating Religion S493 registers for credits under Religion S494. (3 credits) *NOTE A/See § 200.1*

RELIGION S495
Religious Thinkers

Prerequisite: Permission of the Department. Seminar on a particular thinker or school of thought in the history of religion. (3 credits) *NOTE C/See § 200.1*

RELIGION S496
Religious Thinkers

Prerequisite: Permission of the Department. A student repeating Religion S495 registers for credits under Religion S496. (3 credits) *NOTE A/See § 200.1*

RELIGION S497
Topics in Jewish History

A study of a problem or area of concern in Jewish History. Possible topics might be: the nature of the Dead Sea Sect, the background of the expulsion of the Jews from Spain, Jewish reactions to catastrophe since 1492. Jewish nationalism in the twentieth century, Jewish messianic movements, history of the ancient Near East, history of the Jews in North America. (3 credits) *NOTE C/See § 200.1*

RELIGION S498
Topics in Jewish History

Prerequisite: Permission of the Department. A student repeating Religion S497 registers for credits under Religion S498. (3 credits) *NOTE A/See § 200.1*

41.14 Department of Applied Social Science

Professor and Chairman of the Department
RICHARD McDONALD

Professor
HEDLEY DIMOCK

Associate Professor
ROBERT NAGGE

Assistant Professors
SYLVIA CARTER
RAYE KASS
DAVID KELLEHER
ALEXANDER SPROULE

Assistant Professor of Psychology
DOROTHY HACCOUN

41.14.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 41.3

The superscript indicates credit value.

66 BA Specialization in Applied Social Science

Prerequisites: Psychology S211[6], Sociology S210[6]
Year I
9 ApSS S212[6], S351[3]
6 Psyc S271[6]
Soc S310[6] or S330[6]
Year II
6 The other of Soc S310[6] or S330[6]
6 Psyc S241[6] or Soc S241[6]
Year II & III
15* Chosen from ApSS S413[6], S421[3], S431[6], S441[3], S451[3], S452[3], S471[6]
6 Chosen from Soc S411[3], S412[3], S413[3], S414[3], S438[3], S439[3]
6 Chosen from Psyc S422[6], S428[6], S438[6], S442[6], S452[6], S454[6]
6 ApSS S400[6]
**NOTE: With permission of the Department, up to six credits may be substituted from other ApSS courses.*

42 BA Major in Applied Social Science

Prerequisites: Psychology S211[6], Sociology S210[6]
6 ApSS S212[6]
18* Chosen from ApSS S351[3], S413[6], S421[3], S431[6], S441[3], S451[3], S452[3]
6 Psyc S271[6]
6 Soc S330[6]
6 Chosen from Psyc S302[3], S303[3], S304[3], S305[3], S309[3]

**NOTE: With permission of the Department, up to six credits may be substituted from other ApSS courses.*

60 BA Major in Social Welfare

6 credits in Economics
6 Pol Sc S320[6]
6 Elective credits in Psychology
18 Elective credits in Sociology
12 Econ or Pol Sc or Psyc Elective credits
6 ApSS S461[6]
6 Psyc S241[6] or Soc S241[6]

NOTE: Only 18 of the 60 credits may be at the '200' level.

41.14.2 CERTIFICATE IN COMMUNITY SERVICE

The Department of Applied Social Science offers a 30-credit programme, consisting of 18 credits of applied courses and 12 credits of foundation courses chosen as electives, leading to the Concordia University Certificate in Community Service.

Admission Requirements

General Admission Requirements are listed in Section 13.

Students must be actively involved in Community Service either as staff or as volunteers or members of boards, committees or councils of community organizations and agencies.

Courses (in sequence)

Credits		*Courses*	*Year*
3	(3	ApSS S351	1
Plus			
6	(3	Soc S440	1 or 2
	(3	Soc S441	1 or 2
Plus			
6	(6	Pol Sc S333	1 or 2
From	(6	Pol Sc S334	1 or 2
	(3	Soc S444	1 or 2
	(3	Soc S445	2
	(6	Soc S450	2
Plus			
15	(6	ApSS S431	2
	(3	ApSS S441	1 or 2
	(6	ApSS S442	2

30 credits total

NOTE:

1. *Where indicated, students will need to take introductory courses when these are prerequisites for courses in the Certificate.*
2. *In the event that a student is awarded an exemption from a required course it will be necessary for the student to replace that course with another relevant to the programme, chosen in consultation with the Coordinator of the Certificate Programme.*
3. *Students were first admitted to the programme in the 1976-77 academic year.*

41.14.3 CERTIFICATE IN FAMILY LIFE EDUCATION

The Department of Applied Social Science offers a 30-credit programme, consisting of 18 credits of applied courses and 12 credits of foundation courses chosen as electives, leading to the Concordia University Certificate in Family Life Education.

Admission Requirements

General Admission Requirements are listed in Section 13.

Students must be actively involved in Family Life Education through a sponsoring community agency or organization. Such persons are likely to be affiliated with the Association of Family Life Educators of Quebec.

Courses (in sequence)

Credits		*Courses*	*Year*
	(3	ApSS S351	1
6	(3	ApSS S454	1
Plus			
12	(3	Educ S392	1 or 2
from	(3	Psyc S302	1 or 2
	(3	Psyc S303	1 or 2
	(3	Psyc S309	1 or 2
	(6	Psyc S383	1 or 2
	(6	Soc S420	1 or 2
	(6	Soc S442	1 or 2
	(6	Soc S458	1 or 2
Plus			
12	(6	ApSS S431	2
	(3	ApSS S453	2
	(3	ApSS S455	2

30 credits total

NOTE:

1. *Where indicated, students will need to take introductory courses when these are prerequisites for courses in the Certificate.*
2. *In the event that a student is awarded an exemption from a required course it will be necessary for the student to replace that course with another relevant to the programme, chosen in consultation with the Coordinator of the Certificate Programme.*
3. *Students were first admitted to the programme in the 1976-77 academic year.*

41.14.4 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1.

APPLIED SOCIAL SCIENCE S212
Introduction to Applied Social Science

This course is an orientation to the field of applied social science with a specific focus on relating to and working with other people. It includes a consideration of personal identity, interpersonal relations and concepts of helping relationship. (6 credits) *NOTE A/See § 200.1*

APPLIED SOCIAL SCIENCE S321
Introduction to Social Gerontology

The course will deal with the problem of growing old in contemporary society; and with the biological, psychological and sociological dimensions of the human aging processes. The course is also designed to identify the needs of the elderly in our community and to examine approaches to dealing with these needs. (3 credits) *NOTE A/See § 200.1*

APPLIED SOCIAL SCIENCE S351
Understanding Group Behaviour

This is a laboratory course which includes participating in a group and analyzing such common group dynamics as leadership, com-

munication, decision-making, member roles and sensitivity to others. (3 credits) *NOTE A/See § 200.1*

APPLIED SOCIAL SCIENCE S400
Introduction to Social Intervention

Prerequisite: Permission of the Department. Introduction to the principles and practice of social intervention. Approaches to social problem identification and analysis. The role of the social change agent. Elements of working with individuals, groups and communities. Laboratory periods will permit the application of course content to practice. (6 credits) *NOTE A/See § 200.1*

APPLIED SOCIAL SCIENCE S413
Adolescent Behaviour in Urban Areas

Prerequisite: Applied Social Science S212. A survey of adolescent values, family and group relations, social mobility, friendship patterns, educational and vocational adjustment with a focus on understanding social behaviour in urban communities. Attention will also be given to programmes attempting to enhance adolescent development and reduce social problems. (6 credits) *NOTE A/See § 200.1*

APPLIED SOCIAL SCIENCE S421
Administration in Community Serving Organizations

Prerequisite: Permission of the Department. This course explores the uses of administrative process to support the goals of a community serving organization. A variety of administrative approaches and their applications to the development of an organization (school, hospital, agency) will be explored. Attention will be given to personnel development, planning and systems, and interactions with resource people associated with community organizations. (3 credits) *NOTE A/See § 200.1*

APPLIED SOCIAL SCIENCE S431
Group Development and Supervision

Prerequisite: Applied Social Science S212. Orientation to systematic group development in community-serving organizations. Development of understanding and skill in using group procedures to facilitate communication and decision-making in small groups, classes and committees. Focus on helping others improve their functioning with groups through supervision and training. Each student will study the development of an agency group throughout the year. (6 credits) *NOTE A/See § 200.1*

APPLIED SOCIAL SCIENCE S441
Community Development

Prerequisite: Applied Social Science S212 or enrolment in a concentration in a social science. Orientation to systematic community problem solving dealing with communications, assessment of needs, decision-making, and intergroup relations, drawing on the contribution of the social sciences. (3 credits) *NOTE A/See § 200.1*

APPLIED SOCIAL SCIENCE S442
Advanced Integrative Seminar in Community Organization and Animation

Prerequisite: This course is for Certificate students only. The purpose of this course is to coordinate the other courses required by the programme and to integrate the theory derived from the contributing disciplines within an applied social science perspective. (6 credits) *NOTE A/See § 200.1.*
NOTE: This course was first offered in the 1976-77 academic year.

APPLIED SOCIAL SCIENCE S451
Principles and Practices of Guidance

Prerequisite: Applied Social Science S212. Principles and methods of counselling and guidance with particular reference to their application in the setting of the community-serving organizations. Organization and administration of a guidance service including measurement and appraisal, techniques of counselling, occupational and educational information, and referral, will be considered. (3 credits) *NOTE A/See § 200.1*

APPLIED SOCIAL SCIENCE S452
Introduction to Counselling

Prerequisites: Applied Social Science S212, S451. A survey of typical problems, information, techniques, principles, policies and points of view useful to professional staff in community-serving organizations; focus on educational, vocational and relationship problems, and the use of counselling techniques in staff relations and supervision. (3 credits) *NOTE A/See § 200.1*

APPLIED SOCIAL SCIENCE S453
Sexuality and Human Relations

Prerequisite: Third-year standing and permission of the Department. Using a variety of small group processes, the seminar will explore physical and psychosocial factors in the emergence of the sexual self. Objectives of the seminar include helping students to increased awareness of sexual values and attitudes. (3 credits) *NOTE A/See § 200.1.*
NOTE: This course was first offered in the 1976-77 academic year.

APPLIED SOCIAL SCIENCE S454
Special Seminar in Family Communication

Prerequisite: This course is for Certificate students only. A course in marriage and family living, including decision-making, interpersonal relationships, communication, male-female lifestyle and problem-solving within a family. Handling of crisis, loneliness, death and dying will also be considered. The course studies marriage and family relationships in a way that can pertain directly to the student's own living experiences. (3 credits) *NOTE A/See § 200.1*
NOTE: This course was first offered in the 1976-77 academic year.

APPLIED SOCIAL SCIENCE S455
Advanced Integrative Seminar in Family Life Education

Prerequisite: This course is for Certificate students only. The purpose of this course is to coordinate the other courses required by the programme and to integrate the theory derived from the contributing disciplines within an applied social science perspective. (3 credits) *NOTE A/See § 200.1.*
NOTE: This course was first offered in the 1976-77 academic year.

APPLIED SOCIAL SCIENCE S461
Social Welfare and the Social Welfare Services

Prerequisite: Second year standing or permission of the Department. A general course concerned with social welfare problems in modern society: some analysis of these problems in relation to economic and cultural patterns. A description of the functional settings in which social welfare services are practised. A consideration of the methods used in social welfare, and some consideration of the connective links between social welfare services and religion, law, medicine, nursing, teaching and other professions. (6 credits) *NOTE A/See § 200.1*

APPLIED SOCIAL SCIENCE S471
Special Projects Seminar

Prerequisite: Second year Major in Applied Social Science and permission of the Department. A seminar course for field projects, surveys and research studies undertaken by each student. (6 credits) *NOTE A/See § 200.1*

APPLIED SOCIAL SCIENCE S472
Special Projects Seminar

Prerequisite: Second year Major in Applied Social Science and permission of the Department. A student repeating Applied Social Science S471 registers for credits under Applied Social Science S472. (6 credits) *NOTE A/See § 200.1*

APPLIED SOCIAL SCIENCE S481
Special Seminar in Applied Social Science

Prerequisites: Psychology S211, Sociology S210 and permission of the Department. The subject for the seminar will vary from year to year reflecting recent developments in social change, new approaches in the behavioural sciences or the special interests of the instructor. (6 credits) *NOTE C/See § 200.1*

APPLIED SOCIAL SCIENCE S482
Special Seminar in Applied Social Science

Prerequisite: Permission of the Department. A student repeating Applied Social Science S481 registers for credits under S482. (6 credits) *NOTE A/See § 200.1*

APPLIED SOCIAL SCIENCE S485
Special Seminar in Applied Social Science

Prerequisite: Permission of the Department. The subject for the seminar will vary from year to year reflecting recent developments in social change, new approaches in the behavioural sciences, or the special interests of students or the instructor. (3 credits) *NOTE C/See § 200.1*

APPLIED SOCIAL SCIENCE S486
Special Seminar in Applied Social Science

Prerequisite: Permission of the Department. A student repeating Applied Social Science S485 registers for credits under Applied Social Science S486. (3 credits) *NOTE A/See § 200.1*

Social Science
Assistant Professor of Social Science
JACK GOLDNER

41.15 Department of Economics

Associate Professor and Chairman of the Department
MORTON STELCNER

Professors
MURIEL ARMSTRONG
DOUGLAS FISHER
MORIDO INAGAKI
JOHN O'BRIEN
SHREEKANT PALEKAR

Associate Professors
JALEEL AHMAD
A. ANASTASOPOULOS
VITTORIO CORBO
GEORGE DAVIDOVIC
FRANK MÜLLER
BALBIR SAHNI
ABRAHAM TARASOFSKY

Assistant Professors
JEFFREY BERNSTEIN
JON BRESLAW

Visiting Professor
STEPHEN MARGLIN

Visiting Assistant Professors
PATRICK McCARTHY
CEDRIC NATHAN

Sessional Lecturers
DONALD BAUM
CHRISTOPHER COOK

41.15.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 41.3

The superscript indicates credit value.

60 BA Honours in Economics

6 Econ S209[3] and Econ S210[3]
18 Econ S311[6], S318[6], S415[6]
6 Econ S270[3] or Math N-203[3] or Math N-209[3], and Econ S271[3] or Math N-206[3]
6 Math N-207[3] and Econ S375[3] or QM C243[3] and QM C244[3]
6 Chosen from Econ S430[6], S434[6], S438[6]
18 Econ Elective credits

60 BA Specialization in Economics

6 Econ S209[3] and Econ S210[3]
18 Econ S311[6], S318[6], S415[6]
6 Econ S270[3] or Math N-203[3] or Math N-209[3], and Econ S271[3] or Math N-206[3]
6 Math N-207[3] and Econ S375[3] or QM C243[3] and QM C244[3]
6 Chosen from Econ S430[6], S434[6], S438[6]
18 Econ Elective credits

42 BA Major in Economics

6 Econ S209[3] and S210[3]
6 Econ S311[6]
6 Econ S318[6]
6 Econ Hist chosen from Econ S430[6], S434[6], S438[6]
6 Math N-207[3] and Econ S375[3] or QM C243[3] and QM C244[3] or equivalent.
12 Econ Elective credits

30 Minor in Economics

6 Econ S209[3] and S210[3]
6 Econ S311[6]
6 Econ S318[6]
12 Econ Elective credits

41.15.2 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1.

ECONOMICS S209
Introduction to Microeconomics

Introduction to the functioning of the market system; concepts of supply and demand; the role of prices in resource allocation; production decisions by firms. Analysis of differences between competition and monopoly and the implications for economic efficiency; theories of labour markets and wage determination. (3 credits) *NOTE A/See § 200.1*

NOTE: This course may be taken for credits in the Russian Studies and Urban Studies Programmes.

ECONOMICS S210
Introduction to Macroeconomics

An introductory analysis of aggregate economic activity. The focus is on the priciples of determination of the level of employment, national income, real output, inflation, and international balance of payments. The course also analyzes the principles which govern the trade relations among countries. These topics are integrated by a discussion of government monetary and fiscal policies to stabilize economic activity. (3 credits) *NOTE A/See § 200.1*

NOTE: This course may be taken for credits in the Russian Studies and Urban Studies Programmes.

ECONOMICS S221
Introduction to Economic History

This course deals with the development of industrial economics from the Industrial Revolution to the present. Emphasis on long-term forces such as demographic, technological, and institutional evolution. (6 credits) *NOTE A/See § 200.1*

NOTE: This course may be taken for credits in the Russian Studies Programme.

ECONOMICS S270
Mathematics for Economists I

Prerequisites: Economics S209 and S210. This course introduces the student to differential and integral calculus and to their applications in economic analysis. topics covered include set theory, the concept of limits and rules for differentiation and integration. It also deals with the relevance of these concepts and techniques to economic problems such as maximization, equilibrium analysis, and dynamic adjustments. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S271
Mathematics for Economists II

Prerequisites: Economics S209 and S210, S270, or Mathematics N-203 or N-209. The main emphasis is on the study of linear algebra and its application to the solution of economic models consisting of a system of linear simultaneous equations. Topics covered include: matrices and vectors; basic properties of determinants and their use in solving equations pertaining to economic problems such as linear programming and constrained optimization. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S274
The Use of Economic Data

Prerequisites: Economics S209 and S210. Concepts of economic accounting and related measurement techniques, with special reference to the procedures used in Canada and in international economic institutions like the U.N., I.M.F., and O.E.C.D. The topics include: national accounts, input-output tables, flow-of-funds accounts, national balance sheets, international and interregional comparison of economic data, choice of index. (3 credits) *NOTE A/See § 200.1*

NOTE: This course may be taken for credits in the Urban Studies Programme.

ECONOMICS S304
Canadian Economic Policy I

Prerequisites: Economics S209 and S210. A study of the effects of government policies on resource allocation with emphasis on Canadian policy problems. Topics will include government regulation of business, agriculture policy. transportation policy, and tariff policy. (3 credits) *NOTE A/See § 200.1*

NOTE: This course may be taken for credits in the Canadian Studies Programme.

ECONOMICS S305
Canadian Economic Policy II

Prerequisites: Economics S209 and S210. A study of trade, government stabilization, growth, and welfare policies with emphasis on Canadian policy problems. Topics also include monetary and fiscal policies, policies to encourage growth, and social security policies. (3 credits) *NOTE A/See § 200.1*

NOTE: This course may be taken for credits in the Canadian Studies Programme. Students who have credits for Economics N-405, or Economics N-431 before 1969-70 may not take this course for credits.

ECONOMICS S306
Monopoly, Competition and Regulation

Prerequisites: Economics S209 and S210. This course shows how the basic tools of economics can be applied towards the understanding of aspects of industrial organization such as firm size and industrial structure, price discrimination, resale price maintenance, advertising, technical innovation, and foreign ownership. These issues will be studied in the context of Canadian industrial structures, current anti-combines legislation and its enforcement. The course will also deal with government policies with regard to industry performance and public utility regulation. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S307
Economics of the Environment

Prerequisites: Economics S209 and S210. The subject of this course is environmental quality. It proceeds through an analysis of the relationships between the natural environment, economic, and institutions. The objective is to depict the problem of environmental quality as an economic problem whose solution demands major changes in economic, political and legal institutions. attention is also given to policies of collective environmental actions in which the effective management of common property resources will be discussed. The course con-

cludes with a discussion of some broader issues, such as the consistency of improved environmental quality with continued economic and population growth. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Science and Human Affairs Programme.

ECONOMICS S308
Economics of Natural Resources
Prerequisites: Economics S209 and S210. This course focuses on the problems of the finiteness of the natural resources base in Canada and in the world, and on an analysis of the demand for and supply of natural resources and energy. The course also discusses the economic aspects of a selected group of conservation measures (financial incentives, reallocation of property rights, regulation). (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Science and Human Affairs Programme.

ECONOMICS S309
Economics of Human resources
Prerequisites: Economics S209 and S210. A study of recent contributions by economists towards the understanding and solution of social problems which society currently faces in the areas of crime, health, education and welfare. In addition, specific federal and provincial governmental policies in these areas are analyzed with the standard tools of economics. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S310
Economics of Discrimination
Prerequisites: Economics S209 and S210. The purpose of this course is to examine some economic issues of discrimination with particular reference to women in a Canadian context. Among the topics so examined are: techniques for measuring discrimination and poverty, review of empirical studies, traditional and radical approaches to the study of discrimination, and policies to combat discrimination and poverty. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Womens' Studies Programme.

ECONOMICS S311
Intermediate Microeconomic Theory
Prerequisites: Economics S209 and S210. Theory of consumer behaviour and market demand; production, and theory of the firm; analysis of economic efficiency of alternative forms of market structure; factor markets and factor price determination; welfare economics. (6 credits) *NOTE A/See § 200.1*

ECONOMICS S316
Money and Banking
Prerequisites: Economics S209 and S210. Analysis of the role of money and financial institutions in a modern economy; structure of banking industry and financial markets; credit expansion and monetary control; international financial flows; foreign exchange rates; monetary theory; role of monetary policy in stabilizing the economy. Special emphasis will be placed on monetary and banking problems in Canada. (3 credits) *NOTE A/See § 200.1*
NOTE: Students who have credits for 051 may not take this course for credits.

ECONOMICS S318
Intermediate Macroeconomic Theory
Prerequisites: Economics S209 and S210. A basic course in macroeconomic theory and policy. Among the topics dealt with are the measurement and behaviour of national income and its components (consumer spending, investment spending, etc.), of inflation, and of economic growth. The classical, Keynesian, and postKeynesian approaches are analyzed and compared. The impact of monetary and fiscal policies on the economy is also examined. Primarily for majors, specializations, and honours students. (6 credits) *NOTE A/See § 200.1*

ECONOMICS S375
Introduction to Statistics for Economists
Prerequisite: Mathematics N-207. The course is an introduction to the application of statistical techniques to economic data. Topics discussed will include, among others, time series, statistical inference, analysis of variance, correlation and regression. (3 credits) *NOTE A/See § 200.1*
NOTE: Credits will be given for only one 6 credit course or two 3 credit courses from Economics S375, Geography S362 and S363, Mathematics N-241, Quantitative Methods C243 and 244, Sociology S241. Psychology S241 and Psychology S242. This course may be taken for credits in the Urban Studies Programme.

ECONOMICS S411
Advanced Microeconomic Theory
Prerequisites: Economics S209 and S210, Economics S311. Selected topics in microeconomic analysis including methodology; general equilibrium analysis; welfare economics; theory of the firm; factor pricing and income distribution; capital theory. Primarily for majors, specialization, and honours students. Students should understand the basic techniques of calculus and linear algebra. (3 credits) *NOTE A/See § 200.1*
NOTE: Students who have credits for N-490 prior to 1976-77 may not take this course for credits.

ECONOMICS S412
Mathematical Economics I
Prerequisites: Economics S209 and S210; S270 and S271 or equivalent; S311; S318. Demand theory: classical theory and an introduction to the contemporary theory of demand, revealed preference, von Neuman utility functions. Production theory, linear production functions, CES production functions, technological change, input-output analysis, introduction to linear programming. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S413
Mathematical Economics II
Prerequisite: Economics S412, or permission of the Department. General equilibrium models, existence and stability; capital accumulation over time. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S415
History of Economic Thought
Prerequisites: Economics S209 and S210, Economics S311 and S318. This course traces the development of economic analysis from ancient to modern times; it also includes a

description of the prevailing economic, social, and cultural environment in which economists have written. Primarily for majors, specialization, and honours students. (6 credits) *NOTE A/See § 200.1*

ECONOMICS S418
Advanced Macroeconomic Theory

Prerequisites: Economics S209 and S210, S318. Selected topics in macroeconomic analysis including construction of models of the economy encompassing the labour, product, and financial markets; the role of monetary and fiscal policies; classical, Keynesian, and post-Keynesian models. Primarily for majors, specialization, and honours students. Students should understand the basic techniques of calculus and linear algebra. (3 credits) *NOTE A/See § 200.1*

NOTE: Students who have credits for N-490 prior to 1976-77 may not take this course for credits.

ECONOMICS S420
Economics of the Public Sector

Prerequisites: Economics S209 and S210. Examines government fiscal activity within the context of a free market system. Government revenue sources, particularly income taxes, sales taxes, and property taxes, are analyzed. Techniques for examining the efficiency of government expenditure decisions such as cost-benefit analysis are also developed. Other topics include intergovernmental fiscal relations in Canada and governmental debt. (6 credits) *NOTE A/See § 200.1*

ECONOMICS S422
International Economic Relations

Prerequisite: Economics S209 and S210. Postwar international institutions: IMF, GATT, etc. The international monetary system, its problems and proposed reforms. Currency areas, exchange control systems and clearing systems. European integration and the common market. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S423
Theory of International Trade

Prerequisites: Economics S209 and S210, S311. A study of the theories of comparative costs and reciprocal demand and their development; the theory of factor reward equalization; the theory of foreign exchanges; the theory of tariffs, customs union theory, and related topics in the theory of international trade. Emphasis will be placed upon the theoretical rather than the institutional analysis of international economics, though the theories will be illustrated by consideration of current problems in international economic affairs. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S426
Urban Economics

Prerequisites: Economics S209 and S210. This course will focus on the basic issues of economic growth and stagnation, urban land use, the problems of the urban public economy, and special urban problems such as transportation, congestion, poverty, housing and urban renewal, and zoning. (3 credits) *NOTE A/See § 200.1*

NOTE: This course may be taken for credits in the Urban Studies Programme.

ECONOMICS S427
Regional Economics

Prerequisites: Economics S209 and S210; Economics S311 or S318 previously or concurrently, or Economics S426. This course introduces the student to the methods and techniques of regional economies analysis and their application to the problems of regional economies within Canada. Among the microeconomic topics covered are the location behaviour of firms and households and the factors determining the allocation of land among alternative competing uses. Macroeconomic topics include the measurement and analysis of regional income and growth levels, cyclical changes in those levels, and inter-regional differrences in growth rates. Policy problems pertinent to Canadian regions are stressed throughout the course. (3 credits) *NOTE A/See § 200.1*

NOTE: This course may be taken for credits in the Urban Studies Programme.

ECONOMICS S428
Labour Economics

Prerequisites: Economics S209 and S210; S311 or S318, previously or concurrently. This course examines the determination of wages and employment both at the level of the firm as well as of the economy as a whole. Analyses are made of the demand for labour by individual firms, occupational, regional and inter-industry wage differentials, effect of wage changes on employment, impact of unions on wages and employment, and labour mobility. Aggregate questions examined include current problems of structural and cyclical unemployment, price inflation, and the role of monetary and fiscal policies in attaining full employment and controlling inflationary pressures. These topics are analyzed in the context of the Canadian economy. (3 credits) *NOTE A/See § 200.1*

NOTE: Students who have credits for Economics 271 or 471 before 1969-70 may not take this course for credits.

ECONOMICS S429
Industrial Relations

Prerequisites: Economics S209 and S210. A study of the general and practical problems that arise in the labour field, such as collective bargaining, the legal framework for the settlement of industrial disputes, the weapons of industrial conflict; the labour movement; contemporary labour issues such as automation, cost-push inflation and structural unemployment. These topics will be illustrated by facts relating to industrial relations in Canada. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S430
Economics History of Europe

Prerequisites: Economics S209 and S210. The course will explore the causes and consequences of the British Industrial Revolution and its diffusion to the Continent in terms of differential national growth patterns and social problems associated with economic change. It will include an analysis of free trade, economic nationalism, the new imperialism, the importance of the crisis of 1929 in terms of economic organization, thought and policy, and post World War II reorganization, in terms of planning the welfare state, and economic integration. (6 credits) *NOTE A/See § 200.1*

ECONOMICS S434
Economic History of Canada

Prerequisites: Economics S209 and S210. This course is designed to introduce the student to Canadian economic development from the early period of settlement to the present day. Emphasis will be placed on the economic history of Canada since Confederation. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

ECONOMICS S438
Economic History and Development of the United States

Prerequisites: Economics S209 and S210. American economic history will be presented from the viewpoint of the "new" economic history. This is a topical approach in which formal economics is used to evaluate traditional historical material. Among the topics which will be covered are: the economic consequences of slavery, the American business cycle, the development of American central banking, the merger movements, the causes of the American "take-off", and the economic causes and consequences of the major wars. (6 credits) *NOTE A/See § 200.1*

ECONOMICS S440
Economic Development

Prerequisites: Economics S209 and S210, S311. The course investigates comparative economic development with special attention to problems of capital formation, population growth, quality of the labour force, and social and cultural attitudes towards economic modernization. Theories of economic development are evaluated in the context of the realities of historical patterns and the varying degrees of ability to achieve modernization. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Asian Studies Programme.

ECONOMICS S442
Quantitative Development Economics I

Prerequisites: Economics S209 and S210; S271 or equivalent; S311. Methods of national accounting and input-output analysis for underdeveloped countries. Methods of comparing standards of living. Patterns of economic development. Appraisal of models constructed on the premises of modern theories of economic development. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S443
Quantitative Development Economics II

Prerequisite: Economics S442. The model of economic policy. Planning in stages. The model of linear activity analysis and efficient decentralization of economic decions. Planning of efficient accumulation of capital. Individual project evaluation. Foreign aid and debt service models. Projection of manpower requirements. Evaluation of empirical applications of optimum planning to underdeveloped economies. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S446
The Economic Development of Quebec

Prerequisites: Economics S209 and S210. This course will review past and present trends in the economic development of Quebec, though emphasis will be placed on the economic growth of Quebec since the Second World War Attention will be given to the regional aspects of its growth problems. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

ECONOMICS S460
Comparative Economic Systems

Prerequisites: Economics S209 and S210. A comparative study of contemporary economic systems. While mainly concerned with the institutional features of contemporary free market economics, the course will also deal with their counterpart, the systems of a command economy and a Socialist market economy. Of primary interest will be the institutions, mechanisms and policies which govern allocation, efficiency, growth and distribution of income, with emphasis on the historical background of the institutions and the social, political and ideological influences which continue to shape them. (6 credits) *NOTE A/See § 200.1*

ECONOMICS S464
Marxian Economics

Prerequisites: Economics S209 and S210. A general survey of Marxian theory; Marx's role and influence; his predecessors and followers. The topics that will be discussed include historical and dialectical materialism, the role of the proletariat in Marxian teaching, Marx and the Socialist International, the evolution of Marxian thought, Marx and the labour movement, the labour theory of value, the theory of economic development, and the breakdown of capitalism. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Russian Studies Programme.

ECONOMICS S465
Soviet Economics

Prerequisites: Economics S209 and S210. The evolution of the Soviet economic system and the policy measures adopted to deal with the problems of establishing and consolidating a socialist state. Special attention is given to Lenin's role in the early phase of the Soviet system and early economic measures such as the collectivization of farms. Other topics covered are: the nature of economic planning and progress under Stalin, and the important recent reforms and modifications of the Soviet system under the impact of Liberman's proposals. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Russian Studies Programme.

ECONOMICS S468
Theory and Practice of Cooperation

Prerequisites: Economics S209 and S210 or permission of the Department. This course will deal with the effect of cooperatives on economic and social development with emphasis on Quebec and Canada. Among the topics discussed are the origins and development of the cooperative economy, differences between cooperative, capitalist and communist economic systems; economic, social, educational and moral transformations taking place under cooperative influence, and the role of cooperation on the international political scene. (6 credits) *NOTE A/See § 200.1*

ECONOMICS S476
Econometrics I

Prerequisites: Economics S270 and S271, or equivalent; and either Mathematics N-207 and Economics S375, or Quantitative Methods C243 and C244, or Mathematics N-241, or equivalent. A study of the econometric problems generally associated with single equation multiple regression analysis. A knowledge of basic matrix algebra and mathematical statistics is required. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S477
Econometrics II

Prerequisite: Economics S476 or equivalent. In the first part of this course there will be a brief discussion of the estimation problems associated with simultaneous equation econometric problems. The second will be devoted to the analysis of certain specific economic models proposed in the literature. (3 credits) *NOTE A/See § 200.1*

ECONOMICS S490
Study in a Special Subject

Prerequisite: Permission of the Department. This course is designed primarily for honours and major students. Its purpose is to provide an opportunity for advanced students to intensify their study beyond the traditional areas of specialization already represented by the curriculum. The selected subject will vary with the special interest of the instructor offering the course in any given year. (6 credits) *NOTE A, C/See § 200.1*

ECONOMICS S491
Study in a Special Subject

Prerequisite: Permission of the Department. A student repeating Economics S490 registers for credits under Economics S491. (6 credits) *NOTE A/See § 200.1*

ECONOMICS S493
Study in a Special Subject

Prerequisite: Permission of the Department. This course is designed primarily for honours and major students. Its purpose is to provide an opportunity for students to intensify their study beyond the traditional areas of specialization already represented in the curriculum. The selected subject will vary with the special interest of the instructor offering the course in any given year. (3 credits) *NOTE A, C/See § 200.1*

ECONOMICS S494
Study in a Special Subject

Prerequsite: Permission of the Department. A student repeating Economics S493 registers for credits under Economics S494. (3 credits) *NOTE A/See § 200.1*

41.16 Department of Education

Associate Professor and Chairman of the Department
JITENDRA BHATNAGAR

Professors
HAROLD ENTWISTLE
JOHN HARRISON

Associate Professors
GARY BOYD
GARY COLDEVIN
FRANCES FRIEDMAN
P. DAVID MITCHELL

Associate Professor of Education and Psychology
DONNA WHITE

Assistant Professors
LOIS BARON
DENNIS DICKS
MONA FARRELL
ARPI HAMALIAN
GEORGE HUNTLEY
ELLEN JACOBS
WILLIAM KNITTER

Lecturers
GEOFFREY FIDLER
CAROLYN LAVERS
FLORENCE STEVENS

41.16.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 41.3

The superscript indicates credit value.

72 BA Honours in Education and Philosophy

Year I
9 Ed S210[6], S230[3]
12 Phil S210[6] or S211[6] and Phil S221[6] or S231[6]
Year II
6 Ed S430[6]
6 Phil S380[6]
6 Chosen from Ed S421[6], S441[6], S451[6]
6 Chosen from Phil S231[6], S368[3], S378[3], S431[6]
Year III
6 Ed S480[6]
6 Phil Elective credits at '400' level excluding Phil S493[6], S495[6]
3-6 Chosen from Ed S490[3], S491[3], S492[3], S493[3]
6 Phil S369[6]
Year II or III
3-6 Chosen from Ed S415[3], S416[3], S417[3]

30 Minor in Education

30 Chosen from Ed S201[6], S210[6], S230[3], S312[3], S390[3], S392[3], S415[3], S416[3], S417[3], S421[6], S430[6], S441[6], S451[6], S497[3]

60 BA Major in Early Childhood Education

33 Ed S202[6], S261[6], S315[6], S453[3], S460[6], S461[6]
12 Art Ed C200[6], Music C421[6]
6 Ed S421[6], S430[6], S441[6], S451[6] (in consultation with Department)
6 Chosen from Ed S415[3], S416[3], S417[3] (in consultation with Department)
3 Chosen from Psyc S212[3], S213[3], S214[3], S215[3], S302[3], S303[3], S304[3], S305[3], S402[3], S403[3] (in consultation with Department)

**NOTE Every student unless specifically exempted by the director of the programme is required to undertake an internship in the third year as well as internships or workshops in Education S202, S261, S315, and Music C421.*

30 Minor in Philosophy of Education

30 Chosen from Ed S201[6], S230[3], S430[6], S441[6], S490[3], S491[3], S492[3], S493[3]

41.16.2 CERTIFICATE IN EDUCATION

The Department of Education offers a 30 credit programme leading to the Concordia University Certificate in Education and certification from the Provincial Department of Education.

Admission Requirements

1. Evidence of full-time employment with a recognized educational institution in Quebec.
2. Possession of a Quebec Provisional Teaching Authorization.

Courses

Education S201[6]
Education S210[6]
either Education S401[3], or Education S402[3], *or* an equivalent course in teaching methodology.
Education S453[3]
Education S471[6]
6 additional undergraduate credits in Education chosen in consultation with the Director of the Programme.

Transfer

Students with a maximum of 15 credits from other recognized institutions may be allowed to transfer into the programme. *NOTE:*

1. *The student must meet the minimum scholarity requirements set by the provincial government before being recommended for certification.*
2. *This programme is not open to teachers of vocational subjects.*

41.16.3 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1.

For programmes which may be of particular interest to teachers, see § 21

EDUCATION S201
The Nature and Function of Teaching

An introduction to the purpose, theories and methods of teaching. (6 credits) *NOTE A/See § 200.1*

EDUCATION S202
Introduction to Early Childhood Education

Prerequisite: Enrolment in Early Childhood Education major. This course provides an introduction to Early Childhood Education through an examination of curriculum planning for nursery schools, kindergartens and day care centres and their historical background, organization, and objectives. Students are required to participate in assigned preschool and day care programmes six to eight hours a week for two terms. (6 credits) *NOTE A/See § 200.1*

EDUCATION S210
Psychology of Education

This course will introduce the student to a broad range of content in educational psychology, including its scope and methods, learning motivation, growth and development, adjustment, individual differences, guidance, and concept of self. (6 credits) *NOTE A/See § 200.1*

EDUCATION S230
Introduction to Philosophy of Education

This course will introduce the student to the content and form of several major educational theories, and to conceptual and logical procedures of philosophizing about education with particular reference to teaching and learning. (3 credits) *NOTE A/See § 200.1*

EDUCATION S261
Subject and Methods of Early Childhood Education

Prerequisite: Enrolment in Early Childhood Education. Students in this course will be concerned with the following topics: art, music and dance, drama, language, number, and environmental studies. They will specialize in three topics. (6 credits) *NOTE A/See § 200.1*

EDUCATION S312
Technology for Educational Change I

This course introduces the student to a wide range of ideas and practical skills in Educational Technology, a field which encompasses mass communications, computer-based systems, audio-visual instrumentation, simulation and gaming, systems analysis and instructional design. A modular approach is adopted; each module covers, in a six-week period, a particular area of thought in Educational Technology. Two modules are offered. The first deals from a theoretical viewpoint with human communication processes (semiotics, gesture, sociolinguistics, etc.). The second module focuses on specialised applications of computer technology in education — computer assisted learning (CAI) and computer managed instruction (CMI). The course will require laboratory work outside class. (3 credits) *NOTE A/See § 200.1*

EDUCATION S313
Technology for Educational Change II

Prerequisite: Education S312. Like Education S312, this course offers two modules focusing on particular aspects of Educational Technology. Each module is covered in six weeks. The first module deals with small-studio television production, tutorials in production skills culminating in script-writing and group production of an educational TV programme. The second module introduces techniques for systematically designing instructional units tailored to individual needs. The course requires laboratory work outside class. (3 credits) *NOTE A/See § 200.1*

EDUCATION S315
Developmental and Educational Psychology of Early Childhood

Prerequisite: Second year standing in Early Childhood Education major or permission of the Department. This course will study the affective and cognitive development of the child from birth to six years with particular reference to the way in which familial and educational factors interact to influence the child's behaviour. Observation of the preschool child in both home and school settings for six hours a week for two terms is a course requirement. (6 credits) *NOTE A/See § 200.1*

EDUCATION S390
Current Issues in Education

A consideration of a contemporary issue or issues in education. The issues studied may differ from year to year. (3 credits) *NOTE C/See § 200.1*

EDUCATION S391
Current Issues in Education

Prerequisites: Education S390 and permission of the Department. A student repeating S390 registers for credits under Education S391 (3 credits) *NOTE A/See § 200.1*

EDUCATION S392
Problems in Education

A cross-disciplinary or integrated approach to an educational problem or problems. The problem studied may vary from year to year. (3 credits) *NOTE C/See § 200.1*

EDUCATION S393
Problems in Education

Prerequisites: Education S392 and permission of the Department. A student repeating S392 registers for credits under Education S393. (3 credits) *NOTE A/See § 200.1*

EDUCATION S401
Special Methods of Teaching—Elementary

This course is offered only to students enrolled in the Certificate in Education programme. It will deal with methods of teaching in the elementary school; emphasis will be placed on practical application of educational theories. (3 credits) *NOTE A/See § 200.1*

EDUCATION S402
Special Methods of Teaching—Secondary

This course is offered only to students enrolled in the Certificate in Education Programme. This course will deal with methods of teaching a high-school subject. The course will be individually designed to suit the student's field of specialization. (3 credits) *NOTE A/See § 200.1*

EDUCATION S415
Education of the Slow-Learning Child

Prerequisite: Education S210 or S315. This course will describe the cognitive, social and emotional problems of slow-learning children and discuss educational techniques for coping with these problems. (3 credits) *NOTE A/See § 200.1*

EDUCATION S416
Education of the Gifted

Prerequisite: Education S210 or S315. This course will discuss the special educational problems of gifted children; it will also assess the effectiveness of the techniques usually employed to deal with these problems. (3 credits) *NOTE A/See § 200.1*

EDUCATION S417
Education of the Culturally Disadvantaged

Prerequisite: Education S210 or S315. This course will describe the cognitive, social and emotional problems of culturally disadvantaged children and discuss educational techniques for coping with their problems. (3 credits) *NOTE A/See § 200.1*

EDUCATION S421
Sociology of Education

Prerequisite: Sociology S210. The social organization of education activities. The role of educational institutions in socialization, social control and technology. Education and stratification, mobility and social change. (6 credits) *NOTE A/See § 200.1*

EDUCATION S430
Philosophy of Education

Prerequisite: 3 credits at university level in Philosophy or Education S230. The application of philosophical method with particular reference to the aims, methods, discipline and concepts of education is considered in this course. Students will be expected to become familiar with the principal authors and with the current periodical literature in the field of philosophy of education. (6 credits) *NOTE A/See § 200.1*

EDUCATION S441
History of Educational Ideas

Prerequisite: Second-year standing. In this course students will study major educational ideas and idea systems. These will be reviewed in philosophical, religious, political and social perspective. (6 credits) *NOTE A/See § 200.1*

EDUCATION S442
Education in Canada

Prerequisite: 6 credits in Canadian History. It is advisable that students have a reading knowledge of French. This course will study the history of Canadian education, and, more particularly, the history of education in Quebec. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

EDUCATION S451
Comparative and International Education

Prerequisite: 6 credits in Education. The study of educational systems at home and abroad with particular emphasis on educational practice in the United States, the United Kingdom, Western Europe, the Soviet Union, China and the Third World. (6 credits) *NOTE A/See § 200.1*

EDUCATION S453
Education in Quebec

Students in this course will study the contemporary movements in and structures of Quebec education. (3 credits) *NOTE A/See § 200.1*

EDUCATION S460
Early Childhood Education Internship

Prerequisite: Third-year standing in Early Childhood Major. This course involves a supervised nursery school or kindergarten teaching internship of 5 half-days or 2½ full days a week for one semester. In addition, students will participate in weekly seminar discussions of related methodological and developmental concerns. The topics will include behaviour management, language development, reading, writing, children's literature and drama, mathematics, science, health, safety and social studies. (6 credits) *NOTE A/See § 200.1*

EDUCATION S461
Issues in Early Childhood Education

Prerequisite: Enrolment in Early Childhood major. This course will provide a study of alternative practices and theories of education for preschool and kindergarten children. (6 credits) *NOTE A/See § 200.1*

EDUCATION S465
Adult Education

Prerequisite: 6 credits in Education. This course will study the history, philosophy, organization and special problems of formal and informal adult education, with particular reference to current developments in Canada. (3 credits) *NOTE A/See § 200.1*

EDUCATION S471
Supervised Internship

This course is offered only to students enrolled in the Certificate in Education Programme. Teaching internship will be carried out in the school where the student is employed. The students will be supervised and their teaching performance evaluated. The students are expected to demonstrate positive evidence of teaching competence and professional behavior (6 credits) *NOTE A/See § 200.1*

EDUCATION S480
Honours Essay in Education

Open to third-year students in Honours in Education and Philosophy (or to others by permission of the Department). (6 credits) *NOTE A/See § 200.1*

EDUCATION S490
Seminar in Epistemology and Education

Prerequisite: Education S430 or permission of the Department. Theories of knowledge are considered in this course, with special attention being given to the bearing of such topics as perception, evidence, truth, knowing and belief on educational thought and practice. Students will be expected to become familiar with recent periodical and other literature in the field. (3 credits) *NOTE A/See § 200.1*

EDUCATION S491
Seminar in Ethics and Education

Prerequisite: Education S430 or permission of the Department. Students in this course will study the principles and methods of moral justification in education. They will be referred to the writing of main authors and recent periodical literature. (3 credits) *NOTE A/See § 200.1*

EDUCATION S492
Seminar in Aesthetics and Education

Prerequisite: Education S430 or permission of the Department. The nature of aesthetic value and experience, and theories of art and beauty will be examined. The development of the emotions and imagination and their functions in aesthetic awareness are central concerns of this course. Students will be expected to become familiar with the relevant literature in the field. (3 credits) *NOTE A/See § 200.1*

EDUCATION S493
Seminar in Philosophy and Education

Prerequisite: Education S430 or permission of the Department. This is an advanced seminar in philosophical analysis and theory in which students will present papers on, and conduct discussions about, educational concepts, aims and practices. Students will be expected to become familiar with the periodical and other literature in the areas under discussion. (3 credits) *NOTE A/See § 200.1*

EDUCATION S497
Selected Topics in Education

Prerequisite: Education S201, or one year's teaching experience, or permission of the Department. Special topics accommodating the interests of the instructor and students. The topics studied may differ from year to year. (3 credits) *NOTE C/See § 200.1*

EDUCATION S498
Selected Topics in Education

Prerequisite: Permission of the Department. A student repeating Education S497 registers for credits under Education S498. (3 credits) *NOTE A/See § 200.1*

41.17 Department of Geography

Associate Professor and Chairman of the Department
DAVID FROST

Professor
DONALD FRASER

Associate Professors
RONALD BRYANT
HARRY CLINCH
MICHAEL MARSDEN
BRIAN SLACK
JAMES YOUNG

Assistant Professors
ROBERT AIKEN
MAXTON BARLOW

Lecturer
JACQUELINE ANDERSON

Lecturer and Coordinator of Geography at Loyola
RONALD DUFFY

41.17.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 41.3

The superscript indicates credit value.

60 BA Honours in Geography

Pattern A: Physical Geography
Year I
18 Geog S211[6], S260[3], S261[3], S271[6]
Years II & III
12 Geog S341[6], S362[3], S391[3]
18 Chosen from Geog S371[6], S372[6], S373[6], S475[3], S476[3]
6 Geog Elective credits at the '300' or '400' level (excluding those listed above)
Year III
6 Geog S491[6]

**NOTE: During the year the Department of Geography will hold a series of field trips outside regular scheduled class times.*
All Honours students will be required to participate in at least five such trips during the course of their undergraduate programme.

60 BA Honours in Geography

Pattern B: Human Geography
Students following this pattern may emphasize Historical Geography.
Year I
18 Geog S211[6], S260[3], S261[3], S271[6]
Years II & III
12 Geog S341[6], S362[3], S391[3]
18 Chosen from Geog S316[6], S322[6], S323[6], S412[6], S422[6]
6 Geog Elective credits at the '300' or '400' level (excluding those listed above)
Year III
6 Geog S491[6]

**NOTE: During the year the Department of Geography will hold a series of field trips outside regularly scheduled class times.*
All Honours students will be required to participate in at least five such trips during the course of their undergraduate programme.

60 BA Honours in Geography

Pattern C: Economic Geography
Students following this pattern may emphasize Urban Geography.
Year I
18 Geog S211[6], S260[3], S261[3], S271[6]
Years II & III
12 Geog S341[6], S362[3], S391[3]
18 Chosen from Geog S331[6], S350[3], S351[3], S355[6], S357[6], S401[6], S451[6], S457[6]
6 Geog Elective credits at the '300' or '400' level (excluding those listed above)
Year III
6 Geog S491[6]

**NOTE: During the year the Department of Geography will hold a series of field trips outside regularly scheduled class times.*
All Honours students will be required to participate in at least five such trips during the course of their undergraduate programme.

60 BA Specialization in Geography

Pattern A: Physical Geography
18 S211[6], S260[3], S261[3], S271[6]
12 S341[6], S362[3], S391[3]
18 Chosen from S371[6], S372[6], S373[6], S475[3], S476[3]
or an approved 6-credit option outside Geography
12 Geog Elective credits at the '300' or '400' level

60 BA Specialization in Geography

Pattern B: Human Geography
Students may emphasize Historical Geography
18 S211[6], S260[3], S261[3], S271[6]
12 S362[3], S391[3], S341[6]
18 Chosen from S316[6], S322[6], S323[6], S412[6], S422[6] or an approved 6-credit option outside Geography
12 Geog Elective credits at the '300' or '400' level

60 BA Specialization in Geography

Pattern C: Economic Geography
Students may emphasize Urban Geography
18 S211[6], S260[3], S261[3], S271[6]
12 S341[6], S362[3], S391[3]
18 Chosen from S331[6], S350[3], S351[3], S355[6], S357[6], S401[6], S451[6], S457[6]
or an approved 6-credit option outside Geography
12 Geog Elective credits at the '300' or '400' level

42 BA Major in Geography

18 Geog S211[6], S260[3], S261[3], S271[6]
12 S341[6], S362[3], S391[3]
12 Geog Elective credits at the '300' or '400' level

30 Minor in Geography

12 Geog S211[6], S271[6]
6 Geog S260[3], S261[3]
12 Geog Elective credits at the '300' or '400' level

41.17.2 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1.

GEOGRAPHY S211
Introduction to Human Geography

A study of the evolution of the earth's populated area and the gradual enlargement of geographical horizons. The emphasis will be on cultural distributions, landscape and settlement, and the geography of economic, social, and political activities. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Urban Studies Programme.

GEOGRAPHY—INTERDISCIPLINARY STUDIES S212
Early Man

An examination of the scientific evidence for the unwritten part of man's evolutionary history. The course will study both food-gathering and food-producing man. Biological and cultural evolution will be considered from both a temporal and a spatial viewpoint against a background of changing natural environment. (6 credits) *NOTE A/See § 200.1*
NOTE: Students who have taken Geography—Interdisciplinary Studies S321 may not take this course for credits.
NOTE: This course may be taken for credits in the Science and Human Affairs Programme.

GEOGRAPHY S260
Introduction to Cartography I

An introduction to the study of the topographic map as a tool of the geographer. This course will focus on the various stages involved in map production and map interpretation. Laboratory assignments of a practical nature, which are complementary to the lectures, form an important part of the course. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Urban Studies Programme.

GEOGRAPHY S261
Introduction to Cartography II

Prerequisite: Geography S260 or permission of the Department. A study of the basic cartographic methods available for presenting quantitative and qualitative statistical data on maps. Laboratory assignments of a practical nature, which are complementary to the lectures, form an important part of the course. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Urban Studies Programme.

GEOGRAPHY S271
The Natural Environment

An introduction to the earth sciences as they relate to the environment of man, with special emphasis on weather, climate and the evolution of landscape. (6 credits) *NOTE A/See § 200.1*

GEOGRAPHY S273
The Sea

A physical, historical, and human geography of the world ocean. The course includes an introduction to oceanography, navigation, and elementary geophysics, as well as an account of travels and discovery ending with modern scientific exploration of the deeps. Topics include coasts and islands; ports, ships, and shipping; submarine topography; waves, tides, and earthquakes; marine life, fish and fisheries. (6 credits) *NOTE A/See § 200.1*

GEOGRAPHY S316
Cultural Geography

Prerequisite: Geography S211 or second year standing in an honours, specialization, or major programme in the Social Sciences. Cultural Geography is concerned with the application of the concept of culture to geographic problems. Attention is focused on the spatial *patterning* of material and non-material elements of culture (culture areas); on the *processes* of cultural, temporal and spatial change; on the *relationships* between man and land (cultural ecology); and especially on how these relationships are reflected in different *ensembles* of man and land (cultural landscapes). (6 credits) *NOTE A/See § 200.1*

GEOGRAPHY S322
Historical Geography of the United States

Prerequisite: Geography S211 or second year standing in an honours, specialization, or departmental major programme in the Social Sciences. A study of the patterns of colonization and settlement. Some emphasis will be placed on the evaluation of various approaches used in the writing of historical geography. (6 credits) *NOTE A/See § 200.1*

GEOGRAPHY S323
Historical and Political Geography of Europe

Prerequisite: Geography S211 or second year standing in an honours, specialization, or departmental major programme in the Social Sciences. A regional survey of the geographical evolution of European nations and states. Consideration will be given to cultural differentiation and to the distribution of population. (6 credits) *NOTE A/See § 200.1*

GEOGRAPHY S331
Urban Geography

Prerequisite: Geography S211, or second year standing in an honours, specialization, or departmental major programme in the Social Sciences or the Faculty of Commerce. A study of the prehistoric town, the Greek and Roman town, towns in the Middle Ages, the trading city, the pioneer town and the modern metropolis. The distribution of such towns, their development, growth and internal pattern of organization will be looked at from an historical and geographical point of view. Problems of conurbations and large metropolitan cities in the present age will be discussed and evaluated. Special emphasis will be given to Canadian cities, to their site, function, organization, growth and development as well as to urban problems relating to zoning, transportation, urban renewal, etc. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Urban Studies Programme.

GEOGRAPHY S341
Regional Geography of Canada

Prerequisite: Geography S211 or S271 or second year standing in an honours, specialization, or departmental major programme in the Social Sciences or the Faculty of Commerce. A study of Canada, past and present, based on the various natural regions into which the country is divided. In the first half of the course an historic-geographical approach will be taken to bring to the student's attention the main trends in Canadian cultural and historical development from aboriginal times to the present. The changing nature of man-land relationships at different periods of time, and under different forms of occupance, will receive particular attention. In the second half of the course the present day pattern of human occupance on a regional and national basis will be analyzed. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

GEOGRAPHY S345
The Geography of a Selected Region

Prerequisite: Geography S211 or S271, or second year standing in Arts. A detailed examination of the physical environment, the people, their history, and the present political and economic patterns within the region. The course will provide a deep understanding of the interrelationships between the constituents of the region, an appreciation of those factors responsible for regional unity and will also illustrate the holistic nature of the geographical discipline. (6 credits) *NOTE A, C/See § 200.1. In alternate years beginning 1976-77 this course will focus on the Geography of the USSR.*
NOTE: This course may be taken for credits in the Russian Studies Programme. A student registering for a second time should register under S346.

GEOGRAPHY S346
The Geography of a Selected Region

Prerequisite: Permission of the Department. A student repeating Geography S345 registers for credits under Geography S346. (6 credits) *NOTE A/See § 200.1*

GEOGRAPHY S350 (458)
Geography of Agriculture

Prerequisite: Twelve credits in Geography or permission of the Department. Classification of agriculture systems, food production in relation to new biological, cultural and marketing developments. There will be some consideration of land use mapping and land potential assessment. (3 credits) *NOTE A/See § 200.1*

GEOGRAPHY S351
Forest Geography

Prerequisites: Geography S211 and S271 or enrolment in an honours, specialization, or major programme in the Department of Biology. A study of the natural development and distribution of world forests, their modification by human interference and the economic impact of forest management. Actual problems will be examined in a Quebec context both in class and in the field. (3 credits) *NOTE A/See § 200.1*

GEOGRAPHY S355
Spatial Organization

Prerequisite: Geography S211 or second year standing in an honours, specialization, or major programme in the Social Sciences or in the Faculty of Commerce. A study of how man organizes spatial activities with the emphasis on the concepts of spatial interaction, location of activities, diffusion and individual decision. (6 credits) *NOTE A/See § 200.1*

GEOGRAPHY S357
Resource Utilization and Conservation

Prerequisite: Geography S211 or second-year standing in an honours, specialization, or departmental major programme in the Social Sciences or in the Faculty of Commerce. The course will examine the resource concept and concepts of conservation together with the regional approach to resource management. Case studies will include problems in developing particular natural resources and inter-state areas of poor economic health with emphasis on the regional and natural parts of such developments. Special emphasis will be given to Canadian problems and those of selected underdeveloped countries. (6 credits) *NOTE A/See § 200.1*

GEOGRAPHY S362
Quantitative Geography I

Prerequisite: Geography S261. An introductory course in the applications of descriptive and analytical statistical techniques in Geography. Lectures and laboratory. (3 credits) *NOTE A/See § 200.1*

NOTE: Only 6 credits will be given from Economics S375; Geography S362 and S363; Mathematics N-241; Quantitative Methods C243 and C244; Sociology S241; Psychology S241 and S242.

NOTE: This course may be taken for credits in the Urban Studies Programme.

GEOGRAPHY S363
Quantitative Geography II

Prerequisite: Geography S362. A study of selected multivariate techniques and their application in geography. Practical projects using computer facilities will be assigned. A course in Computer Science would be an asset. (3 credits) *NOTE A/See § 200.1*

NOTE: Only 6 credits will be given from Economics S375; Geography S362 and S363; Mathematics 241; Quantitative Methods C243 and C244; Sociology S241; Psychology S241 and S242.

GEOGRAPHY S371
Biogeography

Prerequisite: Geography S271 or second year standing in an honours, specialization, or departmental major programme in Science. A study of the distribution of plants and animals with emphasis on their soil and climatic interrelations. Relevant field trips are included. (6 credits) *NOTE A/See § 200.1*

GEOGRAPHY S372
Analysis of the Environment

Prerequisite: Geography S271 or second year standing in an honours, specialization, or departmental major programme in Science. A review of modern theories and techniques in geomorphology, hydrology, pedology, denudation chronology and landscape classification. The course includes a discussion of the Pleistocene Epoch in terms of applied research methods. (6 credits) *NOTE A/See § 200.1*

GEOGRAPHY S373
Climatology

Prerequisite: Geography S271 or second year standing in an honours, specialization, or departmental major programme in Science. The broad aspects of world regional climates considered from the point of view of both physical and dynamic climatology. The course includes practical work. (6 credits) *NOTE A/See § 200.1*

GEOGRAPHY S391
History of Geographical Thought

Prerequisite: Eighteen credits in Geography. A study of the development of the field of geography from ancient times down to the present. Representative geographical works of the Greeks, the Romans and of the Middle Ages, the Age of Discovery, the 19th and 20th centuries will be examined and discussed. The present day concepts of the field and function of geography will receive special attention. (3 credits) *NOTE A/See § 200.1*

GEOGRAPHY—URBAN STUDIES S401
Applied Urban Studies

Prerequisites: Geography S211 or Urban Studies S260; Geography S331 previously or concurrently. A study of the contemporary city with emphasis on the problems arising from urban growth. Attention will be given to the possibilities for planned development including New Towns. The material will be presented by films, tapes and special readings and there will be a discussion each week. (6 credits) *NOTE A/See § 200.1*

NOTE: This course may be taken for credits in the Urban Studies Programme.

GEOGRAPHY S412
Political Geography

Prerequisite: Geography S316 or permission of the Department. The course will be structured around traditional and contemporary themes in political geography. Emphasis will be upon the political/administrative organization of space, the interrelationships between politics and environment, electoral geography, and the geographical aspects of public policy. These will be studied within the context of the four main levels of government (local, regional, national, and international). Consideration will be given to urban and regional systems, and to Canadian situations and problems. (6 credits) *NOTE A/See § 200.1*

GEOGRAPHY S422
Historical Geography of Quebec and Ontario

Prerequisite: Geography S211, S341 or permission of the Department. A study of an historical nature of past geographic patterns, economic, social, cultural and political, in Quebec and Ontario. (6 credits) *NOTE A/See § 200.1*

GEOGRAPHY S451
Special Seminar in Economic Geography

Prerequisites: Geography S211, S355, S362 or permission of the Department. This course will provide opportunities to senior students for discussion and advanced study. Subject matter will vary from year to year to take advantage of the special interests of the seminar leader. (6 credits) *NOTE A/See § 200.1*

GEOGRAPHY S457
Geography of Transportation

Prerequisites: Geography S211, S331 or S355 or permission of the Department. A study

of patterns of transport facilities and traffic flows. Emphasis will be on general concepts of route alignment, network layouts, and on applications of spatial interaction models to economic flows. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Urban Studies Programme.

GEOGRAPHY S462
Advanced Cartography
Prerequisite: Geography S261 and twelve additional credits in Geography. A study of the major stages and techniques involved in map compilation, design and production. Lectures, practical periods with assignments and relevant field trips. (3 credits) *NOTE A/See § 200.1*
NOTE: Students who have credits for Geography N-466 in 1975-76 may not register for this course.

GEOGRAPHY S463
Topics in Applied Cartography
Prerequisite: Geography S462. The subject matter of the course will vary from year to year to take advantage of the special interests of the course instructor and may include such topics as automated cartography, remote sensing, historical cartography or special purpose mapping. Seminars, practicals with assignments and relevant field trips. Students may register for this course a second time under S464 (464). (3 credits) *NOTE C/See § 200.1*

GEOGRAPHY S464
Topics in Applied Cartography
Prerequisite: Permission of the Department. A student taking Geography S463 a second time registers for credits under Geography S464. (3 credits) *NOTE A/See § 200.1*

GEOGRAPHY S475
Hydrology I
Prerequisite: Geography S271, one of Geography S371, S372, or S373 or final year standing in Science or Engineering. Theories and practice of hydrology with emphasis on geographical aspects and resource utilization. Includes introduction to glaciology. (3 credits) *NOTE A/See § 200.1*

GEOGRAPHY S476
Hydrology II
Prerequisite: Geography S475. Soil moisture experiments, textural analysis, hydrological models and field trips. (3 credits) *NOTE A/See § 200.1*

GEOGRAPHY S491
Research Methods
Prerequisite: Final year standing in Honours Geography. A selected review of the methods and techniques used to acquire and process original geographical information in the field and laboratory. Includes field work and practical sessions. (6 credits) *NOTE A/See § 200.1*

These courses were offered in the summer of 1976.

GEOGRAPHY N-324/1
The American Scene. (6 credits)

GEOGRAPHY N-338/1
The Geography of Recreation. (6 credits)

41.18 Department of History

Professor and Chairman of the Department
ROBERT E. WALL

Professors
ALAN H. ADAMSON
E. E. McCULLOUGH
J. CAMERON NISH
LIONEL ROTHKRUG
GEORGE RUDÉ
RICHARD WILBUR

Adjunct Professor of History and Social Sciences
SENATOR THÉRÈSE CASGRAIN

Associate Professors
CHARLES L. BERTRAND
FREDERICK BODE
ROBIN BURNS
FRANK R. CHALK
DAVID WADE CHAMBERS
RICHARD J. DIUBALDO
DONALD GINTER
JOHN L. HILL
FREDERICK H. KRANTZ
JOHN F. LAFFEY
STEPHEN SCHEINBERG
IRVING H. SMITH

Assistant Professors
FRANZISKA E. SHLOSSER
MARTIN SINGER
VERONICA STRONG-BOAG
WALTER VAN NUS

41.18.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 41.3

The superscript indicates credit value.

60 BA Honours in History

Year I
6 Hist S210[6]
6 Hist Elective credits at '200' level
6 Elective credits in Hist at '200' level or related disciplines (with approval of Department)
Year II
6 Hist S390[6]
12 Hist Elective credits*
Year III
6 Hist S490[6]
6 Hist Elective credits at '400' level
6 Hist Elective credits
6 Elective credits in Hist or related disciplines (with approval of the Department)

**Not more than 18 credits in History may be taken at the '200' level.*
NOTE: Students must include six credits in Canadian History among their electives.

66 BA Honours in Philosophy and History

Year I
6 Hist S210[6]
6 Phil S211[6]
Year II
6 Hist S390[6]
12* Chosen from Hist S333[6], S335[6], S336[6]
6 Phil S380[6]
6 Chosen from Phil S301[6], S333[6]
Year III
6 Hist S490[6]
6 Chosen from Phil S405[6], S407[6]
6 Hist Elective credits at '400' level (in consultation with Departmental Honours Adviser.)
6 Phil Elective credits at '300' or '400' level (in consultation with Departmental Honours Adviser)

**Six of these credits may be taken in Year III.*

66 BA Honours in Religion and History

Pattern A: (Asia)
30 Hist S210[6], S261[6], S361[6], S362[6], S390[6]
24 Rel S213[6], S311[6], S312[6], S313[6]
12 Soc* S210[6], S424[6]

NOTE: (a) With the approval of the Honours representative, any 6 credits at '400' level Hist or Rel may be substituted for any specific course. (b) For students interested in the comparative aspects of Islamic devel-

opment, Hist S365[6] is available.

Pattern B: (Europe)

12 Hist S210[6], S390[6]
6 Chosen from Rel S211[6], S213[6]
42 Chosen from Hist S331[6], S332[6], S333[6], S336[6], Rel S327[3], S328[3], S330[3], S361[6], S362[6], S443[6], Soc* S210[6], S424[6]

**Students taking Soc S210 in the Honours programme must also take Soc S424.*

30 Minor in History

6 Hist S210[6]
6 Chosen from Hist S221[6], S251[6], S261[6]
12 Hist Elective credits at '300' level
6 Hist Elective credits at '300' or '400' level

48 BA Major in History

Year I

6 Hist S210[6]
6 Hist Elective credits at '200' level

Year II

6 Hist Elective credits
6 Hist Elective credits at '300' or '400' level

Year III

6 Hist Elective credits
6 Hist Elective credits at '400' level
12 Elective credits in related disciplines or History (with approval of the Department)

NOTE: Students must include six credits in Canadian History among their electives.

41.18.2 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1.

HISTORY S210
History of Europe in the Modern World

A survey of the history of European civilization. An attempt is made to present and analyze in an integrated way all aspects of European society and culture in its rise to a dominant world position. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Russian Studies Programme.

HISTORY—CLASSICS S212
History of Greece and Rome

A political, cultural and social history of Greece and Rome from the Mycenaean Age to the death of the Emperor Nero (68 A.D.), with special emphasis on fifth-century Athen, and Rome of the Republic and Early Empire. No knowledge of Latin or Greek is required. (6 credits) *NOTE A/See § 200.1*

HISTORY—CLASSICS S214
History of the Roman Empire

A political, cultural and social history of the Roman Empire from the death of the Emperor Nero to Justinian the Great. Attention will be paid to the rise of Christianity, and the continuity of Roman law and administration in both the eastern and western parts of the Late Roman Empire. No knowledge of Greek or Latin is required. (6 credits) *NOTE A/See § 200.1*

HISTORY S221
History of Canada

A study of the growth of Canada from the age of exploration to the present time. Emphasis is placed on the political, economic and cultural developments which are of significance in the understanding of the problems of today. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

HISTORY S251
History of the United States

An analysis of the development of the United States, emphasizing the formation of classes and interest groups in early America, the significance and impact of slavery, the sectional battle over national power and its resolution through Civil War and Reconstruction, the development of the modern corporation, the organization of the labour movement, the impact of racism, and the course of American Expansion. (6 credits) *NOTE A/See § 200.1*

HISTORY S261
History of Asia

A survey of the major intellectual traditions, social structures and political institutions of South and East Asia, with particular attention to the changes in the societies of India and China during the past two centuries. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Asian Studies Programme.

HISTORY S281
Historical Perspectives on Contemporary Issues

A thematic and comparative historical approach to contemporary issues. The course will cross national boundaries to consider major current problems from a variety of historical perspectives. (6 credits) *NOTE A/See § 200.1*

HISTORY S321
British North America: 1760-1873

Prerequisite: History S210 or S221. An advanced study of the history of British North America from the British conquest and American Revolution to Confederation. The course will focus on historical topics and problems of interpretation, organized according to the regions of British North America. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

HISTORY S322
Modern Canada: 1840 to the Present

Prerequisite: History S210 or S221. An intensive study of the political, economic and cultural development of Canada since the Act of Union. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

HISTORY S323
French Canada to 1763

Prerequisite: History S210 or S221. An intensive study of Canada during the colonial

regime. Much of the material will be in French. (6 credits)
NOTE: This course may be taken for credits in the Canadian Studies Programme.

HISTORY S325
French Canada: 1763-1867

Prerequisite: History S210 or S221. An intensive study of French Canada from the Conquest to Confederation. Much of the material will be in French. (6 credits) *NOTE A/See § 200.1*

HISTORY S326
Quebec: 1867 to the Present

Prerequisite: History S210 or S221 previously or concurrently. An intensive study of Quebec since Confederation. While due attention will be paid to the political history of Quebec, the purpose of the course is to provide a study of the social, economic and cultural institutions of Quebec. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

HISTORY S328
Women in Western History

A review of the position and roles of women in Western history prior to the 17th century. Beginning with the 17th century, a more detailed discussion of these themes and close scrutiny of selected problems having to do with the roles of women in Europe, Canada and the United States during the last two centuries. Among the problems to be treated will be the history of the Feminist movements, the relationship of women to the process of industrialization and the impact of the world wars of this century on the condition of women. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Women's Studies Programme.

HISTORY S331
History of Mediaeval Europe

Prerequisite: Second year standing. A study of the society and institutions of mediaeval Europe from the fall of Rome to the end of the 15th century. (6 credits) *NOTE A/See § 200.1*

HISTORY S332
History of Early Modern Europe, 1400-1640

Prerequisite: History S210. European history in the Renaissance and Reformation periods. Special attention is given to the shift from Mediaeval to Renaissance civilization in Italy and to the development of early modern societies in Northern Europe. Specific analytical focus is placed on studying the nature of, and relationships between, pre-modern economic, social and cultural structures. Issues involved in the transition to modern societies on different national bases are also stressed. (6 credits) *NOTE A/See § 200.1*

HISTORY S333
Enlightenment and Revolution, 1640-1848

Prerequisite: History S210. European history in the age of the French Revolution, including a study of the scientific and industrial revolutions. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Science and Human Affairs Programme.

HISTORY S335
Social and Intellectual History of Early Modern Europe

Prerequisite: History S210. A study of change and continuity in European society and culture, 1300-1650. Problems studied include feudal-capitalist relationships, the Italian Renaissance, Northern State Development, Protestant Reformation, Scientific Revolution and European Colonial expansion. Methodological issues will be emphasized. (6 credits) *NOTE A/See § 200.1*

HISTORY S336
Social and Intellectual History of Modern Europe

Prerequisite: History S210. The intellectual systems arising in Europe since the 17th century will be explored in the context of the economic and social circumstances which engendered them. This course will begin with the rise of theories of "possessive individualism" and will end with the contemporary cultural crisis. While attention will be paid to the general dynamics of culture, special attention will be devoted to the social functions of particular ideologies. (6 credits) *NOTE A/See § 200.1*

HISTORY S337
History of European Diplomacy, 1870 to the Present

Prerequisite: History S210 or Political Science S385. An intensive study of the relations amongst the Great Powers of Europe from the Franco-Prussian War to the present. (6 credits) *NOTE A/See § 200.1*

HISTORY S341
History of Russia

Prerequisite: History S210. This course traces the origin of the Slavic-speaking peoples in Europe and the emergence of the Russian Empire. After a discussion of the ideology and history of Bolshevism, it studies the history of communist government in the U.S.S.R. and among the Slavic peoples. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Russian Studies Programme.

HISTORY S345
History of Britain since 1460

Prerequisite: History S210; students Honouring in English may register without prerequisite. A survey of the political, economic and social development of modern England. Emphasis is placed on the evolution of parliamentary government in the early period, on the economic changes of the 18th and 19th centuries and on the modern growth of democracy and the social service state. (6 credits) *NOTE A/See § 200.1*

HISTORY S346
Europe—1848-1918

Prerequisite: History S210. A study of the internal development and external relations of the most important states of Western Europe from 1848 to 1918. (6 credits) *NOTE A/See § 200.1*

HISTORY S347
Europe—Since 1918

Prerequisite: History S210. A study of the internal development and external relations of

the Western states of Europe from 1918 to the present. (6 credits) *NOTE A/See § 200.1*

HISTORY S351
Colonial and Early National History of the United States

Prerequisite: History S210 or S251 or permission of the Department. The period of colonization, the development of colonial institutions, the War of Independence and the emerging fabric of national life. (6 credits) *NOTE A/See § 200.1*

HISTORY S352
Jacksonian Era, Civil War, and Reconstruction in the United States

Prerequisite: History S210 or S251 or permission of the Department. The development of American political, social and economic life in the 19th century, including sectionalism and expansion, the characteristics of plantation slavery as a social system, the coming of the Civil War, and the aims and outcome of Reconstruction. (6 credits) *NOTE A/See § 200.1*

HISTORY S354
History of the United States since 1900

Prerequisite: History S210 or S251 or permission of the Department. This course examines major themes of modern American society including the politics of reform, strategies for black survival, and movements for social change. The major emphasis is given to domestic themes. (6 credits) *NOTE A/See § 200.1*

HISTORY S355
Foreign Relations of the United States

Prerequisite: History S210 or S251 or permission of the Department. An analysis of United States foreign policy from 1776 to the present, emphasizing the development of American expansion, America's foreign economic thrust, the origins of the Cold War, America's response to the challenge of revolution in Asia and Africa, and Latin American relations. (6 credits) *NOTE A/See § 200.1*

HISTORY S358
Revolution and Counter-Revolution: The Background to Contemporary Latin Amercia

Prerequisite: History S210 or enrolment in the Major in Spanish. A survey of the roots of instability and reaction in Latin America. Attention will be paid to the following major themes: the impact of the conquest; the socio-economic and political pattern of colonial Latin America; the character and significance of the wars of liberation; peasant and other popular movements; the origins and nature of modern liberation movements; the response of reaction. (6 credits) *NOTE A/See § 200.1*

HISTORY S361
History of Modern India

Prerequisite: History S210 or S261 or permission of the Department. A study of India, Pakistan and Bangladesh. The legacy of divergent cultural, linguistic and political experiences, the crisis of colonialism, and the emergence of national imperatives in the 20th century. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Asian Studies Programme.

HISTORY S362
Modern China

Prerequisite: History S210 or S261 or permission of the Department. An intensive study of Chinese history since 1800 with emphasis on problems in political and intellectual history. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Asian Studies Programme.

HISTORY S363
Traditional China

Prerequisite: History S210 or S261 or permission of the Department. An examination of Chinese history from the beginning to the Ch'ing dynasty (c. 1800). Emphasis will be placed on China's political, intellectual and cultural heritage. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Asian Studies Programme.

HISTORY S365
History of Africa

Prerequisite: History S210 or S261. An analysis of African history, including Egypt and North Africa, from the beginnings of African societies to the present, emphasizing the rise of African kingdoms, the coming of Europeans and the slave trade, African responses to economic imperialism and colonialism, and contemporary Africa's quest for autonomy, economic development, and the liberation of southern Africa. (6 credits) *NOTE A/See § 200.1*

HISTORY S390
Historical Method

Prerequisites: Twelve credits in History and written permission of the History programme adviser. A course in the application of modern historical criticism to a specific problem to be chosen in consultation with the instructor. (6 credits) *NOTE C/See § 200.1*

HISTORY S391
Special Area Studies

Prerequisite: A '200' level course in History. This course affords an opportunity to study a special theme in History, taking advantage of the particular interests of members of the Department. (6 credits) *NOTE C/See § 200.1*

HISTORY S392
Special Area Studies

Students who receive credit for History S391 may take it again as History S392, provided that a different subject is dealt with the second time. (6 credits) *NOTE A/See § 200.1*

HISTORY S421
Advanced Study in Canadian History

Prerequisite: A '300' level course in History or permission of the Department. Seminar in a selected topic in the history of Canada. The emphasis will be on encouraging students to conduct historical investigation on their own under a professor's guidance. The specific content will vary from year to year depending on the instructor. (6 credits) *NOTE C/See § 200.1*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

HISTORY S431
Advanced Study in European History

Prerequisite: A '300' level course in History or permission of the Department. Seminar in a selected topic in the history of Europe. The emphasis will be on encouraging students to conduct historical investigation on their own under a professor's guidance. The specific content will vary from year to year depending on the instructor. (6 credits) *NOTE C/See § 200.1*

HISTORY S445
Advanced Study in Russian and Soviet History

Prerequisites: History S210; History S341 or permission of the Department. This course deals with specific problems in Tsarist and Soviet Russia. In the Pre-Revolutionary period attention is focussed on the emancipation of the peasantry, industrialization and the growth of the opposition parties. In the Soviet period emphasis is placed on the problems of economic growth, the changing pattern of Soviet Marxism and the nature of Soviet foreign policy. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Russian Studies Programme.

HISTORY—SCIENCE AND HUMAN AFFAIRS S446
Advanced Study in the History of Science

Prerequisite: Permission of the Department. Seminar in a selected topic in the History of Science. The emphasis will be on encouraging students to conduct historical investigation on their own under a professor's guidance. The specific content will vary from year to year depending on the instructor. (6 credits) *NOTE A, C/See § 200.1*

HISTORY—SCIENCE AND HUMAN AFFAIRS S447
Advanced Study in the History of Science

Prerequisite: Permission of the Department. A student repeating History — Science and Human Affairs S446 registers for credits under History — Science and Human Affairs S447. (6 credits) *NOTE A/See § 200.1*

HISTORY S451
Advanced Study in American History

Prerequisite: A '300' level course in History or permission of the Department. Seminar in a selected topic in the history of the United States. The emphasis will be on encouraging students to conduct historical investigation on their own under a professor's guidance. The specific content will vary from year to year depending on the instructor. (6 credits) *NOTE C/See § 200.1*

HISTORY S461
Advanced Study in Asian and African History

Prerequisite: A '300' level course in History or permission of the Department. Seminar in a selected topic in the history of Asia and Africa. The emphasis will be on encouraging students to conduct historical investigation on their own under a professor's guidance. The specific content will vary from year to year depending on the instructor. (6 credits) *NOTE C/See § 200.1*
NOTE: This course may be taken for credits in the Asian Studies Programme.

HISTORY S490
Honours Essay

Prerequisite: Honours students only. A course in the application of modern historical criticism to a specific problem to be chosen in consultation with the instructor. (6 credits)

HISTORY S491
Advanced Study in a Special Subject

Prerequisite: Permission of the Department. This course, intended primarily for Honours or Major students, affords an opportunity for more intensive examination of a particular historical theme than is possible in the normal lecture course. The specific subject will vary according to the special interest of the professor offering the course in any given year. (6 credits) *NOTE C/See § 200.1*

HISTORY S492
Advanced Study in a Special Subject

Prerequisite: Permission of the Department. A student repeating History S491 registers for credits under History S492. (6 credits) *NOTE A/See § 200.1*

HISTORY-SOCIOLOGY S493
History and Sociology

Prerequisites: An introductory course in History and in Sociology and second or third year standing. An exploration of the relationships between historical and sociological approaches to the description and analysis of social conditions and social events, paying special attention to questions of methodology and conceptualization. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be counted for credits in either History or Sociology. Students who have taken History-Sociology S456 may not take this course for credit.

These courses were offered in the summer of 1976.

HISTORY N-376/1
The United States and the Middle East: Historical Perspectives and Current Dilemmas. (6 credits)

HISTORY N-377/1
The Modern Middle East, 1789 to the present. (6 credits)

HISTORY N-378/1
Western European Socialism in Crisis, 1900-1940.
(6 credits)

41.19 Department of Political Science

Associate Professor and Chairman of the Department
HORST HUTTER

Professor
IAN CAMPBELL

Associate Professors
HAROLD ANGELL
PARIS ARNOPOULOS
KLAUS HERMANN
LALITA SINGH
BLAIR WILLIAMS

Assistant Professors
SUSAN SHELL
HARVEY SHULMAN

41.19.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 41.3

The superscript indicates credit value.

60 BA Honours in Political Science

18 Pol Sc S311[6], S415[6], S491[6]
18 Chosen from Pol Sc S240[6], S320[6], S330[6]
24 Elective credits selected from at least two of the four areas in Political Science

66 BA Honours in Political Sociology

18 Soc S210[6], or, if exempted, Soc Elective credits (in consultation with Departmental Honours Adviser), S310[6], S447[6]
18 Pol Sc S240[6], S311[6], S413[6]
12 Chosen from Soc S330[6], S436[3], S437[3], S438[3], S439[3], Pol Sc S320[6], S415[6]
12 Chosen from Soc S422[6], S440[3], S441[3], S443[6], S446[6], S455[6], S471[6], Pol Sc S333[6], S334[6], S335[3], S351[6], S436[3], S458[6]
6 Chosen from Soc S481[6], Pol Sc S491[6]

45 BA Major in Canadian Politics

33 Pol Sc S231[6], S311[6], S330[6], S334[6], S335[3], S436[3], S437[3]
6 Pol Sc Elective credits in theory, comparative politics or international relations*
6 Elective credits in a related discipline with Canadian content or Political Science*

**Courses must be approved by the Department.*

48 BA Major in Comparative Political Studies

18 Pol Sc S240[6], S311[6], S458[6]
18 Chosen from Pol Sc S330[6], S333[6], S350[6], S351[6], S353[6], S355[6]
12 Elective credits with relevant comparative or area studies content (with approval of the Department)

48 BA Major in International Affairs

33 Pol Sc S270[6], S311[6], S381[6], S437[3], S483[6], S485[6]
15 Elective credits with relevant international content in Political Science or from other departments (with approval of the Department)

48 BA Major in Political Philosophy

18 Pol Sc S311[6], S320[6], S413[6]
6 Chosen from Phil S210[6], S211[6]
24 Chosen from Phil S369[6], S372[3], S374[3], S376[3], S401[6], S407[6], Pol Sc S415[6], Soc S430[6]

48 BA Major in Political Science

6 Pol Sc S311[6]
18 Chosen from Pol Sc S240[6], S270[6], S320[6], S330[6]
24 Elective credits selected from at least two of the four areas in Political Science

48 BA Major in Political Sociology

18 Soc S210[6], or, if exempted, Soc Elective credits (in consultation with Departmental Honours Adviser,) S310[6], S447[6]
18 Pol Sc S240[6], S311[6], S413[6]
6 Chosen from Soc S330[6], Pol Sc S320[6], S415[6]

6 Chosen from Soc S422[6], S436[3], S437[3], S438[3], S439[3], S440[3], S441[3], S443[6], S446[6], S455[6], S471[6], Pol Sc S333[6], S334[6], S335[3], S351[6], S436[3], S458[6]

30 Minor in Political Science

6 Pol Sc S311[6]
12 Chosen from Pol Sc S240[6], S270[6], S320[6], S330[6]
12 Pol Sc Elective credits

41.19.2 AREAS

Area I—Theory
S311—History of Political Theory
S320—Problems and Concepts in Political Theory
S413—Modern Political Ideologies
S415—Political Analysis

Area II—Comparative Politics
S240—Comparative Politics
S321—Women and the Law
S333—Problems of Public Administration
S334—Urban Politics
S350—Government and Politics of the United States
S351—Political Systems of Western Europe
S353—Soviet and East European Politics
S355—The Politics of Developing Areas
S458—Political Parties
S472—Political Science
—Science and Human Affairs Affairs
—Science and Public Policy

Area III—International Relations
S270—International Relations
S381—International Law
S437—Canadian External Affairs
S483—International Organization
S485—Diplomacy and Foreign Policy

Area IV—Canada
S231—Elements of Public Law
S321—Women and the Law
S330—Government and Politics of Canada
S334—Urban Politics
S335—Quebec Politics
S436—Canadian Federalism
S437—Canadian External Affairs

41.19.3 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1.

POLITICAL SCIENCE S231
Elements of Public Law
This course is an introduction to Canadian Public Law emphasizing such areas as constitutional law, criminal law, administrative law, applications for bail, and consumer protection. In addition, the course will involve a study of the organization and functioning of the court system. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S240
Comparative Politics
A course in comparative politics with special emphasis on the dynamics of the political process. Going beyond constitutional and institutional procedures, this course will include the study of informal realities of decision-making. Most of the illustrative content is based on a comparative study of Canada, the United States, Great Britain and France. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Urban Studies Programme.

POLITICAL SCIENCE S270
International Relations
A course in world affairs dealing with the political, ideological and cultural relations between states and the main characteristics of the global power system. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S311
History of Political Theory
A critical study and analysis of such great thinkers as Plato, Aristotle, Machiavelli, Hobbes, Locke, Rousseau, Hegel, Bentham and Mill on problems of politics. This course is designed to give a survey of systematic political reasoning from the classical period up to the middle of the 19th century in an endeavour to show the foundations of modern political thought. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S320
Problems and Concepts in Political Theory
A course in political theory emphasizing key concepts such as equality, liberty and power. The content of the course will include basic methodology and terminology to the extent that the thematic orientation in any given year requires its inclusion. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S321
Women and the Law
An historical and comparative study of the status of women as seen in different legal systems. The course will deal with women in relation to private, family and public law. The framework will be primarily legal, but will also include a consideration of the social and political implications of women's legal status. Special attention will be directed to Quebec and Canadian law. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Women's Studies Programme.

POLITICAL SCIENCE S330
Government and Politics of Canada

A study of the parliamentary system in Canada with emphasis placed upon the development and judicial interpretation of the British North America Act, the federal system, the nature and organization of political parties, the evolution of cabinet rule, the judicial structure and contemporary problems in Canada. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

POLITICAL SCIENCE S333
Problems of Public Administration

Prerequisite: Political Science S240 or S330. This course deals with the nature and function of the administrative branch of government. The student is introduced to such problems as the organization of government departments, the management of government corporations, budgeting, selection and training of personnel, maintenance of morale and discipline, relationship between legislature and administration, relationship between the administration and the public. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S334
Urban Politics

Prerequisite: Political Science S240 or S330. A course in the problems and prospects in urban politics with special emphasis on the processes of the local community. This course, although primarily dealing with urban politics in Canada, will also go beyond national boundaries for its comparative treatment. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Urban Studies Programme.

POLITICAL SCIENCE S335
Quebec Politics

Prerequisite: Political Science S330. A study of the changing party structure and political issues in Quebec and their relationship to constitutional, cultural and economic factors. Some of the reading material will be in French. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

POLITICAL SCIENCE S350
Government and Politics of the United States

A study of American politics which will deal not only with formal political institutions such as the legislature, the executive and the judiciary, but also the processes and problems of government: public opinion, political parties, pressure groups, health and welfare, foreign policy and racial problems. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S351
Political Systems of Western Europe

Mainly a comparative study of the political systems of Britain, France and Western Germany, but some consideration will be given to the smaller states in Western Europe, such as Switzerland and the Scandinavian countries. (6 credits) *NOTE A/See § 200.1*
NOTE: Students who have credits for Political Science N-451 or either Political Science 416 or 417 before 1969-70 may not take this course for credits.

POLITICAL SCIENCE S353
Soviet and East European Politics

A study of the constitutional, political and administrative system of the Soviet Union and the East European states. Emphasis will be placed on the continuing evolution of the Communist system and the changing relationship between the Soviet Union and the other states. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S355
The Politics of Developing Areas

A study of the politics and structure of government in developing areas such as Asia, Africa or South America against the background of social and economic change since World War II. The specific area which will be studied will vary from year to year depending on the interests of the instructor. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Asian Studies Programme.

POLITICAL SCIENCE S381
International Law

This course will survey the theory and practice of international law from its traditional classical origins to the modern contemporary developments with emphasis on the political and interstate relations aspects. The first half of the course will include basic concepts of the nature of law, state sovereignty, treaties, nationality, jurisdiction, recognition, arbitration and cases of international legal order, control of world conflicts, codification of law, settlement of disputes by the International Court of Justice, human rights and the relation of law to power politics. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S413
Modern Political Ideologies

Prerequisite: Political Science S210 or 220 or S311 or Philosophy S271. This course will cover political theories of the 19th and 20th centuries, dealing with such ideologies as Liberalism, Conservatism, Marxism, Democratic Socialism and Fascism. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S415
Political Analysis

Prerequisites: Political Science S311 or S320 and six other credits in Political Science. A study of the contemporary subject matter and methods of political science. The course deals with: 1) fundamental concepts, principles, institutions, and processes of politics; 2) methods, techniques, instruments and data of social sciences; 3) present theories, such as functionalism, behaviouralism, formalism; 4) political ideals and their impact on policy-making and social control. In addition to the theoretical analysis, critique and evaluation of the latest thinking in political science, the student will participate in testing and practical laboratory periods. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S436
Canadian Federalism

Prerequisite: Political Science S330. A critical and analytical study of the theory of federal government and its application to the nature, principles and techniques of federalism in Canada. The reaction of the Canadian federal system

to the demands of cultural dualism and regional pressures. Some attention will also be given to the problems of provincial governments in their pressure on and adjustment to Dominion-Provincial relations. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

POLITICAL SCIENCE S437
Canadian External Affairs
Prerequisite: Political Science S270 or S330 or History S337. This course will study Canada's position in the world. The presentation will include an outline of the diplomatic history of Canada, as well as an analysis of its foreign and defence policies. Emphasis will be given to the decision-making process by which policy is formulated and executed, with particular reference to Canadian relations vis-à-vis the Americans; the Commonwealth; and the United Nations. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

POLITICAL SCIENCE S458
Political Parties
Prerequisite: Political Science S240 or S451. A study of the history, ideology, organization and electoral geography of political parties in the United States, England, France, Germany and some of the smaller countries in Western Europe. The course will also deal with the different types of party systems, the nature and function of parties in the democratic process, the nature of political elites, pressure groups, the organization of elections and political propaganda. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S465
Advanced Study in a Special Subject
Prerequisites: Six credits in Political Science and enrolment in a Major or Honours programme in the Social Sciences. Subject matter will vary from year to year depending on the interests of the instructor. This course will provide opportunities to senior students for discussion and advanced study. (6 credits) *NOTE C/See § 200.1*

POLITICAL SCIENCE S466
Advanced Study in a Special Subject
Prerequisites: Political Science S465 and permission of the Department. A student repeating Political Science S465 registers for credits under Political Science S466. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S467
Advanced Study in a Special Subject
Prerequisites: Six credits in Political Science and enrolment in a Major or Honours programme in the Social Sciences, or permission of the Department. Subject matter will vary from year to year to take advantage of the special interests of the instructor. This course will provide opportunities to senior students for discussion and advanced study. (3 credits) *NOTE A/See § 200.1*
NOTE: With permission of the Department a student may take this course twice for credits provided that a different subject is dealt with the second time. A student repeating Political Science S467 for credits will register under Political Science S468.

POLITICAL SCIENCE S468
Advanced Study in a Special Subject
Prerequisites: Political Science S467 and permission of the Department. A student repeating Political Science S467 registers for credits under Political Science S468. (3 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE—SCIENCE AND HUMAN AFFAIRS S472
Science and Public Policy
Prerequisites: Science and Human Affairs S201, S202 and one course in Political Science or permission of the Department. The relationship between science and government. Particular emphasis is placed on such problems as the role of the scientist in political decision-making, the making of Canadian science policy, the mix of basic, applied and mission-oriented research, the relations of science and the military, the nature of technocracy and the role of science in economically developing nations. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S483
International Organization
Prerequisite: Political Science S270 or S385. The historical development of the concepts of international organization with special emphasis upon the 19th and 20th centuries. The League of Nations and the United Nations with its specialized agencies will be examined carefully. In addition, certain other international bodies of a regional or specialized nature such as EEC, OAS, OAU and regional integration schemes in general will be considered. (6 credits) *NOTE A/See § 200.1*

POLITICAL SCIENCE S485
Diplomacy and Foreign Policy
Prerequisite: Political Science S270. Foreign and defence policies of the Great Powers; diplomacy, military strategy and intelligence; methods and techniques of policy-making and enforcement. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Asian Studies Programme.

POLITICAL SCIENCE S491
Honours Seminar
Prerequisite: Third-year Honours standing or permission of the Department. Students will choose a topic from one of the various fields in political science. Each student must prepare and submit an appropriate research paper under the supervision of the Department. (6 credits) *NOTE C/See § 200.1*

41.20 Department of Psychology

Associate Professor and Chairman of the Department
JUNE CHAIKELSON

Professors
A. HAROLD GOLDSMAN
TANNIS MAAG
ALEX SCHWARTZMAN
JANE STEWART
JOSEPH ZWEIG

Associate Professors
ZALMAN AMIT
DAVID ANDRES
WILLIAM BRENDER
GABRIEL BRETON
ANNA-BETH DOYLE
DOLORES GOLD
THOMAS GRAY
ANTHONY HILTON
WILLIAM HOOPER
STANLEY MUNOZ
CAMPBELL PERRY
NORMAN SEGALOWITZ
NANCY TAYLOR
ROY WISE

Associate Professor of Education and Psychology
DONNA WHITE

Assistant Professors
EDWARD BRUSSELL
DOROTHY HACCOUN
ELIZABETH HENRIK
MELVIN KOMODA
PETER SERAGANIAN
PETER SHIZGAL
MAXWELL TAYLOR

Adjunct Assistant Professors
GEORGE NEMETH
ANN SUTHERLAND

Lecturers
JOHN CHRISTIAN
JANE LEDINGHAM

41.20.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 41.3

The superscript indicates credit value.

60 BA Honours in Psychology

Year I
12 Psyc S271[6] or S273[6], S412[6]
Year I or II
6 Psyc S241[6] or S242[6]
Year II
18 to 21 Chosen from Psyc S375[3], S421[6], S422[6], S428[6], S432[6], S434[6], S438[6], S442[6], S461[6], S491[3], S492[3]
Year III
12 Psyc S413[6], S472[6]
9 to 12 Chosen from Psyc S421[6], S422[6], S428[6], S434[6], S438[6], S442[6], S452[6], S454[6], S461[6], S462[6], S481[6], S482[6], S491[3], S492[3], S493[3], S494[3]

60 BA Specialization in Psychology

Year I
12 Psyc S271[6], S412[6]
Year I or II
6 Psyc S241[6] or S242[6]
Year II or III
24 Chosen from Psyc S421[6], S422[6], S428[6], S432[6], S434[6], S442[6], S452[6], S461[6]
Year III
6 Psyc S471[6] or equivalent
12 Elective credits from the field of Psychology chosen in consultation with the Department

42 BA Major in Psychology

Year I
12 Psyc S271[6], or S273[6], S412[6]
Year II or III
6 Chosen from Psyc S421[6], S422[6], S432[6], S434[6], S461[6]
24 Chosen from Psyc S241[6] or S242[6], S375[3], S413[6], S421[6], S422[6], S428[6], S432[6], S434[6], S438[6], S442[6], S452[6], S454[6], S461[6], S462[6], S471[6], S481[6], S482[6], S491[3], S492[3], S493[3], S494[3]

30 Minor in Psychology

Year I

6 Psyc S271[6]

Year II or III

24 Chosen from Psyc S241[6] or S242[6], S412[6], S421[6], S422[6], S428[6], S432[6], S434[6], S438[6], S442[6], S452[6], S454[6], S461[6], S462[6], S481[6], S482[6]

NOTE: 6 of these 24 credits may be chosen from among the 3-credit courses in Psychology.

41.20.2 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult Section 200.1

PSYCHOLOGY S211
Introductory Psychology

The purpose of this course is the development of an adequate understanding of known principles of behaviour and experience. The work includes a study of the sense organs and nervous system, perception, learning, memory, motivation and the basic needs, emotional reactions, personality development, adjustment and integration, abnormal personality, mental abilities and aptitudes, social aspects of behaviour and the applications of psychology. (6 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S212
Selected Problems in Learning and Motivation A

Prerequisite: Psychology S211 or second year standing. This course will deal with a selected problem in learning and motivation to be announced each year. The course will be designed to allow the student to explore a problem in considerable depth starting from first principles. Possible topics are: operant behaviour; memory; teaching and learning; maternal behaviour; aggression; sleep. (3 credits) *NOTE C/See § 200.1*

PSYCHOLOGY S213
Selected Problems in Learning and Motivation B

Prerequisite: Psychology S211 or second year standing. This course will deal with a selected problem in learning and motivation to be announced each year. The course will be designed to allow the student to explore a problem in considerable depth starting from first principles. Possible topics are: operant behaviour; memory; teaching and learning; maternal behaviour; aggression; sleep. (3 credits) *NOTE C/See § 200.1*

PSYCHOLOGY S214
Selected Problems in Individual Differences A

Prerequisite: Psychology S211 or second year standing. This course will deal with a selected problem in individual differences to be announced each year. The course will be designed to allow the student to explore a problem in considerable depth starting from first principles. Possible topics are: creativity; intelligence; self-awareness and self-esteem; leadership. (3 credits) *NOTE C/See § 200.1*

PSYCHOLOGY S215
Selected Problems in Individual Differences B

Prerequisite: Psychology S211 or second year standing. This course will deal with a selected problem in individual differences to be announced each year. The course will be designed to allow the student to explore a problem in considerable depth starting from first principles. Possible topics are: creativity; intelligence; self-awareness and self-esteem; leadership. (3 credits) *NOTE C/See § 200.1*

PSYCHOLOGY S241
Statistical Methods in Psychology A

Prerequisites: Any two CEGEP semester courses in mathematics. A basic course in the fundamentals of statistics for psychology and education. Topics include: the construction of frequency distribution; graphic presentation; measures of central tendency and dispersion; correlation and linear regression; elementary probability theory; the binomial distribution and the normal curve; sampling or the reliability of statistics and tests of significance; Chi square; analysis of variance; miscellaneous non-parametric techniques. Lectures and laboratory. (6 credits) *NOTE A/See § 200.1*

NOTE: Only 6 credits will be given from: Economics S375, S471; Geography S362, S363; Mathematics N-241; Quantitative Methods C243, C244; Sociology S241; Psychology S241, S242

PSYCHOLOGY S242
Statistical Methods in Psychology B

Prerequisite: One Semester in Statistics and Probability, at the CEGEP level or equivalent. A course in the fundamentals of statistical inference for psychology. (6 credits) *NOTE A/See § 200.1*

NOTE: Only 6 credits will be given from: Economics S375, S471; Geography S362, S363; Mathematics N-241; Quantitative Methods C243, C244; Sociology S241; Psychology S241, S242.

PSYCHOLOGY S271
Experimental Psychology 1A

Prerequisite: Psychology S211. An examination of experimental method in psychology with an introduction to statistical techniques (primarily descriptive statistics) and laboratory experience in methodology appropriate to all areas of psychology. Lectures and laboratory. (6 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S273
Experimental Psychology 1B

Prerequisites: Psychology S211; Psychology S241 or S242 previously or concurrently and permission of the Department. An examination of experimental method in psychology, with laboratory experience in techniques appropriate to important problem areas. Lectures and laboratory. (6 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S302
Selected Problems in Development A

Prerequisite: Psychology S211 or second year standing. This course will deal with a selected problem in development to be announced each year. The course will be designed to allow a student to explore a problem in considerable depth starting from first principles. Possible topics are: perception of spoken and written language; developmental language disability; learning in infancy and early childhood; critical periods in early development. (3 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S303
Selected Problems in Development B

Prerequisite: Psychology S211 or second year standing. This course will deal with a selected problem in development designed to allow the student to explore a problem to be announced each year. The course will be in considerable depth starting from first principles. Possible topics are: perception of spoken and written language; developmental language disability; learning in infancy and early childhood; critical periods in early development. (3 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S304
Selected Problems in Social Psychology A

Prerequisite: Psychology S211 or second year standing. This course will deal with a selected problem in social psychology to be announced each year. The course will be designed to allow the student to explore a problem in considerable depth starting from first principles. Possible topics are: socialization of the child; social motives; interpersonal attraction; values, beliefs and attitude change; prescriptions for future man. (3 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S305
Selected Problems in Social Psychology B

Prerequisite: Psychology S211 or second year standing. This course will deal with a selected problem in social psychology to be announced each year. The course will be designed to allow the student to explore a problem in considerable depth starting from first principles. Possible topics are: socialization of the child; social motives; interpersonal attraction; values, beliefs and attitude change; prescriptions for future man. (3 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S308
Learning Disabilities

Prerequisite: Psychology S211 or second year standing. This course will deal with selected aspects of current theory, research and practice related to children's learning disabilities. (3 credits) *NOTE A/See § 200.1*

NOTE: Students who have credits for Psychology S302 (436) as Learning Disabilities may not take this course for credits.

PSYCHOLOGY S309
Selected Topics in Adolescence

Prerequisite: Second year standing. This course will deal with selected problems in the psychology of adolescence. The course will be designed to allow the student to explore these problems in considerable depth starting from first principles. Possible topics are: physical change, sexual and sex-related behaviours, socialization identification, intelligence and cognitive growth, school achievement and lifestyles. (3 credits) *NOTE A/See § 200.1*
NOTE: Students who have taken Psychology S303 (435) on adolescence may not take this course for credit.

PSYCHOLOGY S375
Directed Study and Research on a Selected Topic

Prerequisite: Psychology S271, and Psychology S241 or S242, previously or concurrently, second year Honours standing or permission of the Department. Under the supervision of a faculty member, the student is to carry out an independent research project and report it in writing. The area of study must be decided upon through consultation with the faculty member. Lectures and Laboratory. (3 credits) *NOTE A/See § 200.1*
NOTE: Students who have credit for Psychology S275 may not take this course for credits.

PSYCHOLOGY S383
Sexual Differentiation

Prerequisites: Psychology S211 and second year standing. This course will examine the physiological, genetic and social factors that determine sex identity and will consider how sex identity influences life patterns. The effects of these factors on social, motivational and cognitive development and adjustment will be studied. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Women's Studies Programme.

PSYCHOLOGY S402
Selected Problems in the Application of Psychology A

Prerequisite: Second or third year standing. This course will deal with a selected problem in the application of psychology to be announced each year. The course will be designed to allow the student to explore a problem in considerable depth starting from first principles. Possible topics are: personnel selection technique; rehabilitation, psychological foundations; criminal behaviour; behaviour disorders; sexual differentiation; drugs and behaviour. (3 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S403
Selected Problems in the Application of Psychology B

Prerequisite: Second or third year standing. This course will deal with a selected problem in the application of psychology to be announced each year. The course will be designed to allow the student to explore a problem in considerable depth starting from first principles. Possi-

ble topics are: personnel selection technique; rehabilitation, psychological foundations; criminal behaviour; behaviour disorders; sexual differentiation; drugs and behaviour. (3 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S404
Selected Problems in Psychology A

Prerequisite: Second or third year standing. This course will deal with a selected problem in psychology to be announced each year. The course will be designed to allow the student to explore a problem in considerable depth starting from first principles. The particular topic discussed will vary from year to year. (3 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S405
Selected Problems in Psychology B

Prerequisite: Second or third year standing. This course will deal with a selected problem in psychology to be announced each year. The course will be designed to allow the student to explore a problem in considerable depth starting from first principles. The particular topic discussed will vary from year to year. (3 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S412
Modern Psychology in Historical Perspective

Prerequisite: Psychology S211. This course consists of an outline of the history of psychology from early times up to the recent past. The work includes the ancient and medieval background of psychology; the early contributions from the fields of physics and physiology; psychophysics; and historical background of the various schools of psychological thought from the late nineteenth century to the present day. (6 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S413
Contemporary Problems in Psychology

Prerequisite: Third year Honours students or permission of the Department. An intensive treatment of current major problem areas in psychology. (6 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S421
Learning

Prerequisite: Psychology S271 or S273. A study of empirical findings and theoretical issues in the fields of animal and human learning. Topics covered include conditioning, discrimination learning, transfer, verbal learning, and classic and contemporary theoretical issues. (6 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S422
Motivation

Prerequisite: Psychology S271 or S273. Causal analysis of (for example) sleep, hunger, pain, sex, conflict, self-actualization, territoriality, aggression, population-density-dependent behaviour, cooperation and competition. Theories and myths vs. empirical data from physiological, behavioural, and politico-socio-economic studies, both animal and human. (6 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S428
Measurement in Psychology

Prerequisite: Psychology S271 or S273. A consideration of the general problems of measurement in psychology, including instrumentation and scaling procedures for measurement of psychological and physiological processes in the areas of sensation and perception, learning, social psychology and the psychology of individual differences. The use of various psychometric techniques in measurement of achievement, aptitude and personality will be appraised and questions of reliability and validity of tests will be discussed. (6 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S432
Perception

Prerequisite: Psychology S271 or S273. The physiological bases of sensation and perception and their relation to the basic psychological phenomena encountered in vision, audition, and the other senses will be studied. Phenomena such as pattern perception and the perception of distance and movement will be analyzed. The effects of learning, motivation, and social factors upon perceptual processing will also be examined. (6 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S434
Cognitive Processes

Prerequisite: Psychology S271 or S273. An investigation of the complex processes intervening between the stimulus and the response. Topics discussed will include cognitive and language development, psycholinguistics, organization and memory, problem-solving, concept formation, creativity, and cognitive and language disability. (6 credits) *NOTE A/See § 200.1*

NOTE: Students who have credits for Psychology 433 or 431 after 1968-69 may not take this course for credits.

PSYCHOLOGY S438
Developmental Psychology

Prerequisite: Psychology S271 or S273. An experimental and comparative approach to human development from conception to old age, with emphasis on the period from birth to adolescence. Topics discussed will include language, social behaviour, intelligence, learning and perception. (6 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S442
Social Psychology

Prerequisite: Psychology S271 or S273. A study of social factors in the behaviour and attitudes of the individual and of groups, including a survey of the psychology of bias, prejudice, stereotypes, propaganda, opinion, individual and group morale, group dynamics and sociometry. (6 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S452
Personality

Prerequisite: Psychology S271 or S273. The course surveys the various theories of personality and relationships between personality and behaviour. Individual differences in personality will be studied along with related factors such as age, sex, education, genetic and other physical factors, socio-economic level and

other cultural factors. A brief survey and review of basic statistical concepts will be included along with a short introduction to personality measurement. (6 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S454
Behaviour Disorders

Prerequisite: Psychology S271 or S273. A study of the etiology and description of behaviour and psychological disorders, including the psychoneuroses, psychoses and psychosomatic conditions. (6 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S461
Physiological Psychology

Prerequisites: Psychology S211; and Psychology S271 or S273 or one full course in Physiology or General Biology at the CEGEP level or equivalent. This course attempts to relate neurophysiology to such psychological problems as learning, attention, and emotion. The topics treated include excitation and conduction in the neuron; synaptic mechanism; sensory and motor systems, the internal environment; the electrical activity of the brain. Emphasis is given to brain damage studies in animals and man, and the problem of localization of function in the nervous system. (6 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S462
Comparative Psychology

Prerequisites: Psychology S211; Psychology S271 or S273 or one full course in Biology at the CEGEP level or equivalent. A study of behaviour from a comparative viewpoint. Topics of study will include evolutionary changes in brain and behaviour, behaviour genetics and specific aspects of behaviour such as sensory capacities, motivation, emotion, learning, cognitive abilities and social behaviour. (6 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S471
Experimental Psychology II

Prerequisites: Psychology S241 or S242; S271 or S273 and permission of the Department. This course provides experience in the planning, conduct, analysis, and reporting of independent research in the major areas of psychology. Lectures and laboratory. (6 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S472
Advanced Experimental Problems

Prerequisite: Third year honours students or permission of the Department. Supervised investigation of special problems. Each student will be required to conduct an experimental study and to submit an appropriate research paper on the study, under the supervision of the Department. Lectures and laboratory. (6 credits) *NOTE C/See § 200.1*

PSYCHOLOGY S481
Psychology of Work Organizations

Prerequisites: Psychology S271 or S273; and permission of the Department. The scientific study of human behaviour as it occurs in business and industry; an examination of the roles of workers, managers, and consumers, and studies of the social psychology of organizations. (6 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S482
Psychology of Human Learning in the Classroom

Prerequisites: Psychology S211; Psychology S271 or S273 and permission of the Department. A systematic examination of psychological principles and research reports which contribute to an understanding of human learning in the school. (6 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S491
Special Seminar on Selected Topics in Psychology

Prerequisite: Second or third year Honours, Specialization, or Majors standing in Psychology. Subject matter will differ from term to term and from year to year to take advantage of the special interests of the seminar leader. The course will provide opportunities to senior students for discussion and advanced study. (3 credits) *NOTE C/See § 200.1*

PSYCHOLOGY S492
Special Seminar on Selected Topics in Psychology

Prerequisite: Second or third year Honours, Specialization, or Majors standing in Psychology. Subject matter will differ from term to term and from year to year to take advantage of the special interests of the seminar leader. The course will provide opportunities to senior students for discussion and advanced study. (3 credits) *NOTE C/See § 200.1*

PSYCHOLOGY S493
Special Seminar on Selected Topics in Psychology

Prerequisite: Second or third year Honours, Specialization, or Majors standing in Psychology. A student repeating Psychology S491 registers for credits under Psychology S493. (3 credits) *NOTE A/See § 200.1*

PSYCHOLOGY S494
Special Seminar on Selected Topics in Psychology

Prerequisite: Second or third year Honours, Specialization, or Majors standing in Psychology. A student repeating Psychology S492 registers for credits under Psychology S494. (3 credits) *NOTE A/See § 200.1*

41.21 Department of Sociology and Anthropology

Associate Professor of Sociology and Chairman of the Department
H. TAYLOR BUCKNER

Assistant to the Chairman
NELLIE SHARPE

Sociology

Professors
SZYMON CHODAK
HUBERT GUINDON
JOHN JACKSON
KURT JONASSOHN
HAROLD POTTER
SOLOMON RAWIN

Associate Professors
JOHN DRYSDALE
JOSEPH MOULEDOUX
JOSEPH SMUCKER
JOHN WARNER

Assistant Professors
WILLIAM REIMER
ANTHONY SYNNOTT
VIVIENNE WALTERS

Anthropology

Professor
CHARLES BRANT

Associate Professor
ANATOLE KLEIN

Lecturers
PIETER DE VRIES
DOMINIQUE LEGROS

41.21.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 41.3

The superscript indicates credit value.

60 BA Honours in Sociology

6 Soc S210[6] or, if exempted, Soc Elective credits (in consultation with Departmental Honours Adviser)
12 Soc S310[6], S330[6]
12 Soc S241[6], S481[6]
3 Chosen from Soc S411[3], S412[3], S413[3], S414[3]
3 Chosen from Soc S436[3], S437[3], S438[3], S439[3]
24 Soc Elective credits* (in consultation with Departmental Honours Adviser)
**NOTE: With prior approval of the Departmental Honours Adviser the student may substitute up to 12 credits from a related discipline.*
NOTE: Some materials in this programme are in French.

69 BA Honours in Sociology and Philosophy

Pattern A (Epistemology and Methodology)
6 Soc S210[6] or, if exempted, Soc Elective credits (in consultation with Departmental Honours Advisor)
6 Chosen from Soc S241[6], S310[6]
18 Soc S330[6], S422[6], S481[6]
6 Chosen from Soc S420[6], or Soc S436[3], S437[3], S438[3], S439[3]
6 Chosen from Phil S210[6], S211[6], S221[6] or, if exempted, Phil Elective credits
6 Phil S380[6]
6 Chosen from Phil S221[6], S321[6]
6 Phil S369[6], S405[6]
3 Chosen from Phil S372[3], S374[3], S376[3]
6 Chosen from Phil S321[6], S333[6], S369[6], S405[6], S409[6], S421[6], S493[6]

72 BA Honours in Sociology and Philosophy

Pattern B (Man in Society)
6 Soc S210[6] or, if exempted, Soc Elective credits (in consultation with Departmental Honours Adviser)
6 Anth S211[6] or, if exempted, Anth Elective credits (in consultation with Departmental Honours Adviser)
6 Chosen from Soc S310[6], S330[6]

SOCIOLOGY S330
The History of Sociological Theory

Prerequisite: Sociology S210. The student will be introduced to a wide range of sociological theories and to the main theorists from the Greek beginnings to the present day, with emphasis on the 19th and 20th centuries. This course will provide an overview of the various schools of thought that attempt to explain the organization, development, and changes in various aspects of human societies. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY S411
Research Techniques

Prerequisites: Sociology S210, S241 or equivalent, and S310 or permission of the Department. This course is an advanced consideration of the design of research, the methods of data collection, and the techniques of analysis. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Urban Studies Programme.

SOCIOLOGY S412
Field Work Research

Prerequisites: Sociology S210 and S310 or permission of the Department. Methods of fieldwork research in Sociology will be explored and examined in detail. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Urban Studies Programme.

SOCIOLOGY S413
Survey Research Methods

Prerequisites: Sociology S210, S241 or equivalent, and S310 or permission of the Department. Methods of conducting survey research will be examined, such as research design, sampling methods, design and pre-testing of instruments, methods of data collection, logic of analysis and techniques of multivariate analysis and report writing. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Urban Studies Programme.

SOCIOLOGY S414
Selected Topics in Research Methods

Prerequisites: Sociology S210 and S310 or permission of the Department. This course will deal with a selected topic in sociological research methods such as content analysis, interviewing, participant observation, and qualitative analysis. The course will be designed to allow the student to explore the topic in considerable depth. (3 credits) *NOTE C/See § 200.1*
NOTE: With the permission of the Department a student may take Sociology S414 twice for credits, provided that a different subject is dealt with the second time.

SOCIOLOGY S415
Selected Topics in Research Methods

Prerequisite: Permission of the Department. A student repeating Sociology S414 registers for credits under Sociology S415. (3 credits) *NOTE A/See § 200.1*

SOCIOLOGY S420
Self and Society

Prerequisite: Sociology S210. A consideration of basic concepts and of the most important theories in social psychology. Motivation is viewed in terms of the interplay between actors and social structures, and this approach is illustrated by reference to selected empirical studies. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY S421
Sociology of Deviance

Prerequisite: Sociology S210. The nature of deviant or marginal behaviour: legal and non-legal forms. Socialization to deviance; institutionalization of deviance; social control of deviance; structure and culture of deviance. Theories of deviant behaviour and their sociological, legal and practical implications. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY S422
Sociology of Knowledge

Prerequisite: Sociology S210. An examination of the interaction between social structures and meaning and belief systems. Of special concern will be the social influences bearing upon claims to truth and validity and upon definitions of social morality. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Science and Human Affairs Programme.

SOCIOLOGY S424
Sociology of Religion

Prerequisite: Sociology S210 or Religion S213. This course analyzes religions as social realities, examining the variable interrelations between belief, experiences, rituals and social settings in traditional, developing and industrialized society. The course will utilize some of the classical studies of religion by Weber, Durkheim, Geertz, Malinowski, James, Bellah, Eliade, Berger and others. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY S432
Formal Organizations

Prerequisite: Sociology S210. A study of different methods of coordinating human action in social group operations under different environmental conditions. Particular focus is on role systems connected with multi-group structures. The course begins with an historical overview of the field, examines the relationships between formal organizations and their environment (e.g. culture, market structure) and ends with a comparative study of diverse and changing structures in some institutional areas of organization. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY S436
Classical Sociological Theory A

Prerequisites: Sociology S210 and S330 or permission of the Department. This course will explore the works of major social theorists of the late 18th and early 19th centuries. (3 credits) *NOTE A/See § 200.1*

SOCIOLOGY S437
Classical Sociological Theory B

Prerequisites: Sociology S210 and S330 or permission of the Department. This course will explore the works of major social theorists of the late 19th and early 20th centuries. (3 credits) *NOTE A/See § 200.1*

SOCIOLOGY S438
Contemporary Sociological Theory A

Prerequisites: Sociology S210 and S330 or permission of the Department. Analysis of the major trends and issues in 20th century European and North American sociological theory. Emphasis is placed on issues and writings of contemporary significance such as neo-positivism, neo-Marxism and functionalism. (3 credits) *NOTE A/See § 200.1*

SOCIOLOGY S439
Contemporary Sociological Theory B

Prerequisites: Sociology S210 and S330 or permission of the Department. Analysis of the major trends and issues in 20th century European and North American sociological theory. Emphasis is placed on issues and writings of contemporary significance such as symbolic interactionalism, phenemonology, and structuralism. (3 credits) *NOTE A/See § 200.1*

SOCIOLOGY S440
Community Studies

Prerequisite: Sociology S210. Based upon selected community studies, this course will focus upon an interpretation of the findings of these studies within the larger context of urbanization and industrialization with special emphasis given to the methodology of community studies. (3 credits) *NOTE A/See § 200.1*

SOCIOLOGY S441
Sociology of Urban Regions

Prerequisite: Sociology S210. The physical and social characteristics of urban communities are studied with special attention paid to ecological patterns and ecological process. Forms of adjustment, cooperation and control are included in these studies. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Urban Studies Programme.

SOCIOLOGY S442
The Family

Prerequisite: Sociology S210. The course will deal with the following basic topics: mate selection, the social function of families, conjugal roles, social formation of the young, marriage across racial, religious and other social boundaries, and types of family structure. Other topics are added as time and interest permit. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY S443
Collective Behaviour and Social Movements

Prerequisite: Sociology S210. Characteristics of collective behaviour, its origin, development, and relationship to formal social structures. Methods of study and theories to explain observed processes. The nature and function of social movements, their life histories and their relationship to the larger society. Specific case studies of religious, racial, and political movements. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY S444
Intergroup Relations

Prerequisite: Sociology S210. This course is concerned with the sociology of macro-group relations. The emphasis is on the social definition of race. The significance of colour, language, cultural and ethnic differences is examined within a context of stratification and power differentials. Attention is devoted to Caribbean societies, the U.S.A., South Africa and Rhodesia. The decolonization process, the functions and dysfunctions of intergroup conflict, and methods of reducing and increasing tension are discussed. (3 credits) *NOTE A/See § 200.1*

SOCIOLOGY S445
Intergroup Relations in Canada

Prerequisite: Sociology S210. Within the theoretical framework of intergroup relations ethnic groups in Canada will be examined. The groups will include Indians, Inuit, Blacks, Jews, and English and French speakers. The mosaic theory of Canadian ethnic relations will be considered. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

SOCIOLOGY S446
Social Class and Structured Inequality in Modern Society

Prerequisite: Sociology S210. Systems of social differentiation are analyzed. Theories about their origins and consequences, and about degrees and types of mobility related to them, are discussed. The theories are applied to Canada and to the United States as well as to other societies. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY S447
Political Sociology

Prerequisite: Sociology S210. The social and normative structures of political institutions, including political parties; the relationship between political institutions and religious and economic institutions; the rise and fall of political ideologies, systems and institutions; the making and communication of policies, the rejuvenation of elites. Political attitudes and behaviour are analyzed, as well as political socialization, interest, and involvement. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY S448
Population and Society

Prerequisite: Sociology S210, or an introductory course in a social science. This course consists of a brief survey of population theory and an introduction to the techniques of population analysis. It will cover the size, distribution, and composition of the population; changes in these characteristics; the relationship between population trends and social and economic conditions, with special reference to recent trends. (3 credits) *NOTE A/See § 200.1*

SOCIOLOGY S449
Area Studies in Demography

Prerequisite: Sociology S448. Selected topics of importance in population studies will be explored in some detail. Students will be required to submit a research paper on a significant demographic problem. (3 credits) *NOTE A/See § 200.1*

SOCIOLOGY S450
Seminar in Urban and Metropolitan Studies

Prerequisite: Sociology S441. Intensive study of a few theories and selected mono-

graphs dealing with aspects of urbanization. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Urban Studies Programme.

SOCIOLOGY S452
Law and Society

Prerequisite: Sociology S210. A study of the legal system as an institutionalized system of social control, with special emphasis on its role in times of rapid social change. Problems of definition, validation, enforcement and execution of the law will be examined in several areas of application and in relation to systems of stratification. Special attention will be given to the study of law and of legal organizations in contemporary society, as they intersect with other areas of sociological inquiry, especially social change, conflict, decision-making, and the role of the legal professions. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY S454
Industry and Society

Prerequisite: Sociology S210. Analysis of the nature of change and its consequences in advanced industrialized societies. Special attention will be directed toward corporate structures, the labour movement, the function and meaning of work, leisure and changes in social stratification and the exercise of power. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY S455
Comparative Social Systems

Prerequisite: Sociology S210. Comparative analysis of concepts of social systems with a special account of conflict theory and functionalist approaches to the subject. Examination of problems of development, modernization and social change in a general theoretical framework. Comparative analysis of trends of development in the West, the Soviet Union and Eastern Europe, and the Third World nations. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY S457
Crime and Justice in Society

Prerequisite: Sociology S210. This course will focus on the theories and methods developed in criminology and penology since their modern development beginning with the 19th century. Sociological definitions of crime and the interplay between individual autonomy and communal controls will be analysed. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY S458
The Sociology of Sex Roles

Prerequisite: Sociology S210. This course will focus on sociological aspects of sex roles. Modern social trends will be analysed, with special attention to emerging egalitarian patterns and changes in the socio-economic system. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credit in the Women's Studies programme.

SOCIOLOGY S470
Canadian Social Structure

Prerequisite: Sociology S210. This course will focus on institutional patterns, with particular attention to the system of social stratification and industrial organization. Elements of differential structure, with special reference to Quebec society will be interpreted a) from the historical perspective of modernizing development, and b) within the context of the North American system. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

SOCIOLOGY S471
Quebec Society

Prerequisite: Second year standing. The course focuses on the nature of traditional society and the social forces within Quebec society since the Second World War. It will examine conflicting historical views on Quebec that are relevant to contemporary issues; the consequences of the conquest; the nature of Confederation; and the nature of nationalism and the nation state. Special attention is paid to the language issue, both federally and within Quebec. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

SOCIOLOGY S472
Social Structure of the Soviet Union and Eastern Europe

Prerequisite: Sociology S210. The process of modernization in Russia and Eastern Europe under the socialist order. Within this context, the socialist model will be considered as a variant of "late" modernization, against the background of the Western entrepreneurial experience. A comparative analysis of the Soviet and Yugoslav industrial organization will be approached in terms of (1) historical continuities within each system, and (2) general patterns of socialist industrialism. (3 credits) *NOTE A/See § 200.1*

SOCIOLOGY S481
Honours Seminar

Prerequisite: Honours standing in their final year or permission of the Department. Students engage in a critical study of major sociological work according to their interests. Before the end of the academic year a research paper must be completed and accepted by the Department. (6 credits) *NOTE C/See § 200.1*

SOCIOLOGY-HISTORY S493
History and Sociology

Prerequisites: An introductory course in History and in Sociology, and second or third year standing. An exploration of the relationships between historical and sociological approaches to the description and analysis of social conditions and social events, paying special attention to questions of methodology and conceptualization. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be counted for credits in either History or Sociology. Students who have taken History-Sociology S456 may not take this course for credits.

SOCIOLOGY S494
Special Seminar A

Prerequisite: Sociology S210. Registration by permission of the Department. Subject matter will vary from year to year to take advantage of the special interests of the seminar leader. This course will provide opportunities to senior students for discussion and advanced study. (6 credits) *NOTE C/See § 200.1*

SOCIOLOGY S495
Special Seminar B

Prerequisite: Sociology S210. Additional prerequisites may be added according to subject matter. Registration by permission of the Department. Subject matter will vary from year to year to take advantage of the special interests of the seminar leader. This course will provide opportunities to senior students for discussion and advanced study. (6 credits) *NOTE C/See § 200.1*

SOCIOLOGY S496
Special Seminar

Prerequisite: Permission of the Department. A student repeating Sociology S494 or S495 registers for credits under Sociology S496. (6 credits) *NOTE A/See § 200.1*

SOCIOLOGY S497
Special Seminar C

Prerequisite: Sociology S210. Registration by permission of the Department. Subject matter will vary from year to year to take advantage of the special interests of the seminar leader. This course will provide opportunities to senior students for discussion and advanced study. (3 credits) *NOTE C/See § 200.1*

SOCIOLOGY S498
Special Seminar D

Prerequisite: Sociology S210. Additional prerequisites may be added according to subject matter. Registration by permission of the Department. Subject matter will vary from year to year to take advantage of the special interests of the seminar leader. This course will provide opportunities to senior students for discussion and advanced study. (3 credits) *NOTE C/See § 200.1*

SOCIOLOGY S499
Special Seminar

Prerequisite: Permission of the Department. A student repeating Sociology S497 or S498 for a second time registers for credits under Sociology S499. (3 credits) *NOTE A/See § 200.1*

41.21.3 Anthropology

41.21.4 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 41.3

The superscript indicates credit value.

60 BA Honours in Anthropology

Year I
6 Anth S211[6]
6* Chosen from Ling S221[6] Int St/Geog S212[6] Int St/Anth S333[6], Soc 210[6]
6 Chosen from Soc S241[6], S420[6], S440[3], S444[3], S445[3], S455[3], S471[6]
Year II
6 Anth S434[6]
12 Chosen from Anth S425[6], S458[6], S459[6], S461[6]
Year III
6 Anth S499[6]
12 Chosen from Anth S421[6], S462[6], S464[3], S465[3], S466[3], S467[3], S468[6]
6 Anth Elective credits

**Students must take Soc S210 in year I if they do not have CEGEP equivalent.*

42 BA Major in Anthropology

6 Anth S211[6]
6 Chosen from Ling S221[6], Int St/Geog S212[6], Int St/Anth S333[6], Soc S210[6]
6 Chosen from Soc S241[6], S420[6], S440[3], S444[3], S445[3], S455[6], S471[6]
6 Anth S434[6]
6 Chosen from Anth S425[6], S458[6], S459[6], S461[6]
6 Chosen from Anth S421[6], S462[6], S464[3], S465[3], S466[3], S467[3], S468[6]
6 Anth Elective credits

30 Minor in Anthropology

12 Anth S211[6], S434[6]
18* Chosen from *A.* Anth S425[6], S458[6], S459[6], S461[6] *B.* Anth S421[6], S462[6], S464[3], S465[3], S466[3], S467[3], S468[6]

**At least 6 credits must be chosen in both A and B.*

41.21.5 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult section 200.1

ANTHROPOLOGY
Anthropology S211
Introduction to Anthropology

This course deals with the evolution of man and his culture during prehistory, the differentiation of races, family and kinship structures in simple and complex societies, and the religious beliefs and practices of ancient and modern primitives in selected parts of the world. (6 credits) *NOTE A/See § 200.1*

ANTHROPOLOGY/INTERDISCIPLINARY STUDIES S333
Introduction to Archaeology

An introduction to the archaeology of the ancient civilizations of the Mediterranean world. Special emphasis will be given to the methodological approach to archaeology. (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Science and Human Affairs Programme.

ANTHROPOLOGY S421
Peoples and Cultures of Africa

Prerequisite: Anthropology S211 or registration in a Major or Honours programme in Sociology. A study of the development of traditional cultures in sub-Saharan Africa. Emphasis will be upon the interrelations of techno-economic, social, structural and ideological aspects, with considerable attention to recent and prospective changes. (6 credits) *NOTE A/See § 200.1*

ANTHROPOLOGY S425
Magic, Science and Religion

Prerequisite: Anthropology S211 or Religion S213. A comparative study of beliefs, ritual and ceremony in tribal, peasant and modern societies. Consideration of anthropological theories regarding the development and functions of supernaturalistic and naturalistic modes of thought. (6 credits) *NOTE A/See § 200.1*

ANTHROPOLOGY S434
History of Anthropological Thought

Prerequisite: Third-year standing in a Minor, Major or Honours programme in anthropology; or permission of the Department. A study of the major thinkers and schools of thought in cultural and social anthropology. (6 credits) *NOTE A/See § 200.1*

ANTHROPOLOGY S458
Peasant Society and Culture

Prerequisite: Anthropology S211. This course will examine the social, economic and political organization of peasant societies in Old and New World environments. It will include a discussion of problems of ideological, religious and artistic development and analyze tendencies toward proletarianization in the context of both external and internal forces. (6 credits) *NOTE A/See § 200.1*

ANTHROPOLOGY S459
Anthropology of Conflict and Social Control

Prerequisite: Anthropology S211 or its equivalent. Social conflict and mechanisms of control and resolution will be examined in a cross-cultural and historical perspective. Emphasis will be upon the origins and development of war and other types of conflicts as they relate to the evolution of inequality. (6 credits) *NOTE A/See § 200.1*

ANTHROPOLOGY S461
Kinship, Society and the State

Prerequisite: Anthropology S211 or its equivalent. The comparative study of family, kinship, social strata and classes; the emergence of state organization. Materials will be drawn from a wide variety of cultural and historical contexts. (6 credits) *NOTE A/See § 200.1*

ANTHROPOLOGY S462
Native Societies and Cultures of North America

Prerequisite: Anthropology S211 or Sociology S210. The principles of general anthropology applied in a survey course on the American Indians. The advent of man to America, including Inuit; brief survey of Indian civilizations; present-day problems of Canadians and U.S. Indians and Inuit (6 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Canadian Studies Programme.

ANTHROPOLOGY S464
Peoples and Cultures of India

Prerequisites: Anthropology S211 or registration in a Majors or Honours programme in Sociology. This course will deal with the development of these cultures from their earliest manifestation to the present. Emphasis will be upon the interrelations of techno-economic, social, structural and ideological aspects, with considerable attention to recent and prospective changes. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Asian Studies Programme.

ANTHROPOLOGY S465
Chinese Culture and Society

Prerequisites: Anthropology S211 or registration in a Majors or Honours programme in Sociology. This course will deal with the development of this culture from its manifestation to the present. Emphasis will be upon the interrelations of techno-economic, social structural and ideological aspects, with considerable attention to recent and prospective changes. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Asian Studies Programme.

ANTHROPOLOGY S466
Peoples and Cultures of Japan and Korea

Prerequisites: Anthropology S211 or registration in a Majors or Honours programme in Sociology. This course will deal with the development of these cultures from their earliest manifestation to the present. Emphasis will be upon the interrelations of techno-economic, social structural and ideological aspects, with considerable attention to recent and prospec-

tive changes. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Asian Studies Programme.

ANTHROPOLOGY S467
Peoples and Cultures of Southeast Asia

Prerequisites: Anthropology S211 or registration in a Majors or Honours programme in Sociology. This course will deal with the development of these cultures from their earliest manifestation to the present. Emphasis will be upon the interrelations of techno-economic, social structural and ideological aspects, with considerable attention to recent and prospective changes. (3 credits) *NOTE A/See § 200.1*
NOTE: This course may be taken for credits in the Asian Studies Programme.

ANTHROPOLOGY S468
Peoples and Cultures in the Caribbean

Prerequisite: Anthropology S211 or its equivalent. This course will examine the cultures of the Caribbean region in the light of colonization, slavery and plantation systems. It will include a discussion of African, Asian and European influences, family and household forms, colour and class, religion and the process of creolization. Current problems of political independence, economic dependence and the consequences of tourism will be given special attention. (6 credits) *NOTE A/See § 200.1*

ANTHROPOLOGY S494
Special Seminar

Prerequisite: Six credits in Anthropology or permission of the Department. Subject matter will vary from year to year to take advantage of the special interests of the seminar leader. This course will provide opportunities to senior students for discussion and advanced study. (6 credits) *NOTE A, C/See § 200.1*

ANTHROPOLOGY S495
Special Seminar

Prerequisite: Permission of the Department. A student repeating Anthropology S494 registers for credits under Anthropology S495. (6 credits) *NOTE A/See § 200.1*

ANTHROPOLOGY S497
Special Seminar

Prerequisites: Twelve credits in Anthropology or permission of the Department. Subject matter will vary from year to year to take advantage of the special interest of the seminar leader. This course will provide opportunities to senior students for discussion and advanced study. (3 credits) *NOTE A, C/See § 200.1*

ANTHROPOLOGY S498
Special Seminar

Prerequisite: Permission of the Department. A student repeating Anthropology S497 registers for credits under Anthropology S498. (3 credits) *NOTE A/See § 200.1*

ANTHROPOLOGY S499
Honours Essay

Prerequisites: Third year standing in Honours Anthropology. Under the supervision of an Anthropology staff member, the student will prepare an Honours essay on a subject chosen in consultation with, and approved by, the professor. (6 credits)

51 Loyola Faculty of Arts and Science

Table of Contents

51.1 LOYOLA FACULTY OF ARTS AND SCIENCE
51.2 ADMISSION REQUIREMENTS
51.3 ANDRAGOGY
51.4 DEPARTMENT OF BIOLOGY
51.5 DEPARTMENT OF BIO-PHYSICAL EDUCATION
51.6 DEPARTMENT OF CHEMISTRY
51.7 DEPARTMENT OF CLASSICS
51.8 DEPARTMENT OF COMMUNICATION STUDIES
51.9 DEPARTMENT OF COMPUTER SCIENCE
51.10 DEPARTMENT OF ECONOMICS
51.11 DEPARTMENT OF ENGLISH
51.12 DÉPARTEMENT D'ÉTUDES FRANÇAISES
51.13 GEOGRAPHY
51.14 DEPARTMENT OF GEOLOGY
51.15 HEALTH EDUCATION
51.16 DEPARTMENT OF HISTORY
51.17 CENTRE FOR INTERDISCIPLINARY STUDIES

- 51.17.1 Canadian Studies Programme
- 51.17.2 Recreation and Leisure Studies
- 51.17.3 Self-Elected Specialization Programme
- 51.17.4 Minor in Environmental Science
- 51.17.5 Minor in Medieval Studies
- 51.17.6 Minor in "Social Responsibility in Science"
- 51.17.7 Minor in Third World Studies
- 51.17.8 Minor in Women's Studies
- 51.17.9 Courses in Interdisciplinary Studies

51.18 LIBRARY STUDIES
51.19 DEPARTMENT OF MATHEMATICS
51.20 DEPARTMENT OF MODERN LANGUAGES AND LINGUISTICS
51.21 DEPARTMENT OF PHILOSOPHY
51.22 DEPARTMENT OF PHYSICS
51.23 DEPARTMENT OF POLITICAL SCIENCE
51.24 DEPARTMENT OF PSYCHOLOGY
51.25 DEPARTMENT OF SOCIOLOGY
51.26 DEPARTMENT OF THEOLOGICAL STUDIES

51.1 Loyola Faculty of Arts & Science

Dean
RUSSELL W. BREEN

Administrative Assistant
DONAT J. TADDEO, Jr.

Assistant Dean (Curriculum)
WILLIAM E. AKIN

Assistant Dean (Faculty)
ROBERT H. PALLEN

Assistant Dean (Students)
EILEEN M. PRESTON

The Faculty of Arts and Science offers programmes leading to a BA or a BSc. The Faculty is organized in three areas: Humanities, Natural Science, and Social Science. There is further an Interdisciplinary Centre, with its own programmes, which operates within each of the areas and between them.

The *Humanities Area* groups the following departments: Classics, Communication Studies, English, French Studies, History, Interdisciplinary Studies, Modern Languages and Linguistics, Philosophy, Theological Studies. It also offers programmes in Library Studies.

The *Natural Science Area* groups the following departments: Biology, Bio-Physical Education, Chemistry, Computer Science, Geology (and Geography), Interdisciplinary Studies, Mathematics, Physics, Psychology. It also offers programmes in Community Nursing and Health Education.

The *Social Science Area* groups the following departments: Economics, Interdisciplinary Studies, Political Science, Psychology, Sociology. It also offers a programme in Andragogy.

In the three areas, the Faculty offers a variety of programmes to meet the varied needs, interests, and goals of students.

The following pages describe the various programmes offered, department by department. Students intending to register in a programme should consult with the relevant department.

It may be helpful to have a general definition of the terms as they are used in Quebec, and applied in Concordia.

Credit: One credit represents 45 hours of student work, either in lectures, labs, or study. A typical 1-semester course will give 3 credits. 3 hours of lecture per week plus 6 hours of personal work per week, over a 15-week period.

Honours: A programme which consists of a *minimum* of 60 credits in a discipline or field, with superior performance being required to enter and remain in the programme, the precise level of such performance to be determined by Senate. Additional requirements may be found under the individual department listings of Honours programmes. It is recognized that "field" may be interpreted as two separate disciplines having a rational relationship (e.g., Philosophy and Religion) or an interdisciplinary field (e.g., Urban Studies). In most cases students who wish to pursue graduate studies will require an Honours programme.

Specialization: A programme which consists of a *minimum* of 60 credits in a discipline or field, without a performance requirement. Students who are interested in subsequent "classification" by the Government may be advised to take a Specialization or Honours programme.

Major: A programme which consists of a *minimum* of 36 credits in a discipline or field. A Major provides solid preparation in a chosen area.

Minor: A programme which consists of a *minimum* of 24 credits in a single discipline. A Minor programme should provide the student with a basic introduction to a chosen area, and introduce him to the methodology and key insights proper to that area.

Certificate: A programme which consists of a *minimum* of 30 credits. A Certificate programme may be used as a component of an Honours, Specialization, or Major programme.

Combinations of Major and Minor programmes and of Certificates are possible. However, no Bachelor degree will be granted without a concentration (Major, Specialization, or Honours) in some area.

Some departments offer joint Honours programmes, and joint Specialization programmes.

51.2 Admission Requirements

General requirements are listed in § 13. Specific requirements for admission to various programmes leading to the degree of Bachelor of Arts and Bachelor of Science are listed below. Science students lacking one or more of these prerequisites may be admitted but they must take these courses in addition to their programme of studies. Arts students may take these prerequisites as credits within their programme of studies.

Programme	Profile	CEGEP Requirements	Loyola Equivalents
Bio-Chemistry	2.19	2 Chem 1 Bio 2 Math 2 Phys	Chem 210 Bio 201 Math 215, 216 Phys 201
Biology	2.19	2 Chem 1 Bio 2 Math 2 Phys	Chem 210 Bio 201 Math 215, 216 Phys 201
Bio-Physical Education	2.19	2 Chem 1 Bio 2 Math 2 Phys.	Chem 210 Bio 201 Math 215, 216 Phys 201
Chemistry	2.20	2 Chem 2 Math 2 Phys	Chem 210 Math 215, 216 Phys 201
Community Nursing	0.34	R.N. 1 Year practice	
Computer Science	2.9	4 Math 3 Phys One of the following: 2 Chem 1 Bio 2 Comp Sc	Math 213, 215, 216, 217 Phys 201, 301 One of the following: Chem 210 Bio 201 Comp Sc 211, 241
Geology	2.20	2 Chem 2 Math 2 Phys	Chem 210 Math 215, 216 Phys 210
Mathematics (BSc)	2.21	2 Chem 4 Math 2 Phys	Chem 210 Math 213, 214, 215 Phys 201
Physics	2.20	2 Chem 2 Math 2 Phys	Chem 210 Math 215, 216 Phys 201
Psychology (BSc or BA)	10.1	1 Math 1 Bio 1 Psyc	Math 215 or 301 Bio 201 Psyc 201

All programmes leading to a BA require the D.E.C.

Evening and Summer Programmes

Courses are given in the evening and during the summer for students following programmes on a part-time basis. With permission of the Chairman these courses may be open to full-time day students. Part-time students following programmes in the evening and during the summer are governed by the same administrative structures, academic regulations, admission policies and programme requirements which apply to full-time day students.

Supervision of the academic programmes of part-time students is the responsibility of the Chairman of the department of the student's field of specialization. However, an academic adviser is available during the evening hours, who may act as liaison between part-time evening students and chairmen. Mr. W. J. Cozens, formerly Assistant to the Director of the Loyola Evening Division before its integration with the Day Division, will provide this liaison. His office is located in the Administration Building (Room 116) and will be open from 1 p.m. - 9 p.m. on Monday to Thursday and from 9 a.m. - 5 p.m. on Fridays. Information concerning registration and graduation procedures will also be available from Mr. Cozens.

For full details of courses actually offered in 1977-78, students are advised to request individual brochures from the departments in which they are interested.

51.3 Andragogy

Coordinator:
D. J. POTVIN

51.3.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1.

The superscript indicates credit value.

90 BA Major in Andragogy

42 Andr Elective credits
48 Elective credits

30 Certificate in Andragogy

15 Andr L200[6], L301[3], L303[3], L401[3]
15 Andr Elective credits

51.3.2 ANDRAGOGY

The Bachelor of Arts with a Major in Andragogy is awarded after the completion of 90 credits, 42 of which are in Andragogy and 48 of which are electives.

The Certificate in Andragogy is awarded after the completion of 30 credits including: Introduction to Adult and Continuing Education, Andragogy L200[6]; Foundations of Adult Experience, Andragogy L401[3]; Curriculum Development for Continuous Learning, Andragogy L301[3]; The Evaluation of Adult Learning, Andragogy L303[3].

The electives may be chosen from existing courses offered by the various academic departments provided that these courses have a practical or theoretical application to Adult Education. All electives must be approved by the Coordinator of the Programme. Registration in any Andragogy course is restricted to those who are actively engaged in the administration or teaching of adult learners.

Andragogy L200[6] is a prerequisite to all other courses in Andragogy.

51.3.3 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.5.

ANDRAGOGY L200
Introduction to Adult and Continuing Education

The course is designed to introduce students to basic concepts and principles of andragogy; to give an overview of the current field of adult education, its history, origins, and philosophy; and to provide an experience in some collaborative practices of adult education. (6 credits)

NOTE: This course is a prerequisite to all other courses in Andragogy.

ANDRAGOGY L201
Techniques and Methods in Adult Education

The purpose of the course is to explore a variety of techniques and methods appropriate for use in adult programmes, and to provide an understanding of their usefulness within the context of adult educational principles. (3 credits)

ANDRAGOGY L209
(Also given as Health L209)
Personal Interrelations

This course is designed to provide an orientation to the field of interpersonal relationships and human awareness, focusing particularly on relating to and working with other people. Concepts of personal growth and development will be highlighted. Conducted through weekly seminars. (3 credits)

ANDRAGOGY L301
Curriculum Development for Continuous Learning

The course will examine the philosophical and psychological underpinnings of the different models of adult curriculum planning. Students will have the opportunity to plan, carry out and evaluate a learning episode in order to evaluate the usefulness of a given model to their own planning style. (3 credits)

ANDRAGOGY L303
The Evaluation of Adult Learning

Selected evaluation concepts and techniques and an indication of how they may be used to develop, improve and assess an adult education course of instruction will be emphasized. Attention will be given to evaluation techniques that will provide the information necessary to improve a course of instruction while it is being planned and conducted. (3 credits)

ANDRAGOGY L309
Media Utilization

A previous course in curriculum development and techniques and methods of teaching is desirable prior to entrance. This course is designed for adult educators to learn the application and usage of all audio-visual equipment and to plan, design, produce, evaluate and select audio-visual educational materials relating to the educational process. As much practical experience as possible will be attempted. (3 credits)

ANDRAGOGY L320
(Also given as Bio-PE L484 and Health L320, Nursing L320)
Interviewing Techniques and Counselling Concepts

Prerequisite: Andragogy L209 or equivalent. A course in which the student examines the dynamics of helping interviews, models of human effectiveness, and theories of counselling. The variety of issues to be covered include the enhancement of specific skills through different training experiences, a proper emphasis on self-understanding, an awareness of the role of philosophy, ethical standards and research. This course demands a high level of observation, participation and involvement from each student. (6 credits)

ANDRAGOGY L400
Selected Topics in Andragogy

The student will pursue an area of special interest under supervision. (6 credits)

ANDRAGOGY L401
Foundations of Adult Experience

The basic theme of the course will be the recognition of adulthood as a stage in the life process which has its own unique dynamics, the understanding of which is a precursor to the development of curricula and pedagogical techniques in the field of adult and continuing education. Following a review of physical cognitive and affective processes in human development from infancy through adolescence, the course will focus on adult experience attempting to delineate the continuities and discontinuities of those processes. (3 credits)

ANDRAGOGY L408
(Also given as Bio-PE L486 and Health L408)
Group Structure and the Role of the Community Worker

The course is developed to assist volunteers, interested citizens, street workers, and individuals with no formal health training, but working as a part of a multidisciplinary team, to identify their roles in order to play a more effective part as a community worker. Assignments will be directed toward practical applications of field work to problem solving in a field of their choice: i.e., post-retirement, rehabilitation of drug addicts and alcoholics, single parents, etc. (6 credits)

ANDRAGOGY L421
Introduction to Research in Adult Education

The course is designed to provide an introduction to research in education. The conceptualization of a research problem, the development of hypotheses and the measurement of variables through the use of both descriptive and inferential statistics will be included. Use of computer terminals will be made for the solution of some problems. (3 credits)

ANDRAGOGY L423
Research Design in Adult Education

This course will consist of an experience in developing a research proposal. The statement of the problem, the review of the literature, the formulation of hypotheses, the design, the instrumentation, sampling, data collection, data analysis, and the significance of the study will be emphasized. The reading of recent research reports in adult education will be required. (3 credits)

The following course is a university level course which was offered in the year indicated but which did not appear in the official Calendar.

1976-77
ANDRAGOGY 500B
Research Design in Adult Education
(3 credits)

51.4. Department of Biology

Associate Professor and Chairman
R. T. CRONIN, S.J.

Professor
S. P. DRUMMOND, S.J.

Associate Professors
K. S. DHINDSA
N. N. KAPOOR
R. G. OMRAN

Assistant Professors
P. ALBERT
C. BECKMAN
B. S. MANGAT
J. D. McLAUGHLIN
P. WIDDEN

51.4.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1.

The superscript indicates credit value.

90 BSc Honours in Biology

Year I
6 Bio 311A/B[3], 321A/B[3]
9 Bio Elective credits
6 Chem 326A[3], 328B[3]
3 Math 301A/B[3]
6 Elective credits
Year II
18 Chosen from Bio 410Z[6] or 440Z[6]; 430Z[6], 435A[3], 437B[3]
6 Bio Elective credits
6 Elective credits
Year III
6 Bio 590Z[6]
18 Bio Elective credits
6 Elective credits

90 BSc Specialization in Biology

Year I
6 Bio 311A/B[3], 321A/B[3]
9 Bio Elective credits
6 Chem 326A[3], 328B[3]
3 Math 301A/B[3]
6 Elective credits
Year II
15 Bio 410Z[6] or 440Z[6]; 430Z[6], 435A[3]
3 Bio Elective credits
12 Elective credits
Year III
18 Bio Elective credits
12 Elective credits

69 BSc Specialization in Biology and Psychology

Year I
12 Psyc L202[6], L203[3], L205[3]
6 Chem 326A[3], 328B[3]
3 Bio 321A/B[3]
Year II
12 Bio 420Z[6], 430Z[6]
Year III
12 Bio 440Z[6], 524Z[6]
24 *Psyc Elective credits in any year, of which:
12 are Category I courses (see § 51.24.2)
12 are Category II courses (see § 51.24.2)

**NOTE: Of these electives, 12 credits shall be 300 or 400 level courses.*

36 Major Biology Component

27 Bio Elective credits (chosen according to the other Major)
6 Chem 326A[3], 328B[3]
3 Math 301A/B[3]

36 Major-Minor in Biology

21 Bio 311A/B[3], 321A/B[3], 410Z[6] or 440Z[6]; 430Z[6], 435A[3]
6 Bio Elective credits
6 Chem 326A[3], 328B[3]
3 Math 301A/B[3]

24 Minor in (Science) Biology

6 Bio 311A/B[3], 321A/B[3]
18 Bio Elective credits

24 Minor in (Science) Zoology

3 Bio 321A/B[3]
21 Bio Elective credits (in Zoology, 6 of which may be general)

24 Minor in (Science) Botany

3 Bio 311A/B[3]
21 Bio Elective credits (in Botany, 6 of which may be general)

24 Minor in (Non-science) Biology

24 Bio 300Z[6], 304Z[6], 331A[3], 333B[3], 335A/B[3], 341A[3]

51.4.2 DEPARTMENT OF BIOLOGY

Bachelor of Science Degree

Students registering for the BSc in this Department should have the CEGEP Diploma in Science, or its equivalent, including one course in biology, and two each in chemistry, physics and mathematics.

To complete the requirements for the BSc, they will take a minimum of 90 credits. Each credit represents a minimum of 45 hours, spread across the total activity of lectures, laboratories, seminars and private study. Sixty (60) of these must be taken from courses offered by this Department.

Programmes

Students will register in the programme of their choice, after consultation with members of the Department faculty and approval of the Department Chairman.

The Department offers the following programmes:

Specialization — consists of a minimum of 60 credits, including a *core* of 48 credits and 12 elective credits from specialized areas. The remaining 30 credits may be elected from any department and any faculty.

Honours — consists of a minimum of 72 credits, including a *core* of 48 credits and 24 elective credits from specialized areas. The remaining 18 credits may be elected from any department and any faculty. Students must obtain a minimum of 'B' (65%) in all courses of the basic programme and an overall average of 'B' in the total programme. However, students entering this programme after June 1977 will be governed by new Honours regulations as described in this Calendar under Academic Regulations § 16.2.4 Honours standing will be reviewed annually; candidates may enter upon first registration or before beginning the final 60 credits.

Major Component — consists of a minimum of 36 specified credits; a further 36 specified credits will be taken in another department, and the remaining 18 from any department and any faculty. A joint programme may be arranged upon consultation with the respective faculty members and approval of the respective chairmen involved.

Major-Minor — consists of a minimum of 36 specified credits; a further 24 specified credits will be taken in another department, and the remaining 30 credits from any department and any faculty. Prior consultation with and approval of the departments involved is required. Any existing prerequisites must be satisfied.

Minor — consists of 24 specified credits, taken in conjunction with programmes in other departments or faculties. Any existing prerequisites must be satisfied. Prior consultation for guidance and approval is indicated.

51.4.3 COURSE DESCRIPTIONS

BIOLOGY 201A/B
Introductory Biology

A survey of living organisms with their underlying structures, functions, and relationships, in both the plant and animal kingdoms, as they relate to and help in an understanding of the biology of man. *Lectures:* 3 hours per week for one term. *Laboratory:* 3 hours per week for one term. (3 credits)
NOTE: This course may not be taken for university credit by Biology students.

BIOLOGY 300Z
Fundamentals of Human Biology

Prerequisites: None. A series of lectures, demonstrations and seminars designed to provide non-biologists with a general survey of the fundamental principles of life, with special emphasis on the structures and functions of man. *Lectures:* 3 hours per week for two terms. (6 credits)

BIOLOGY 301A/B
Elementary Techniques

A laboratory course, supplementary to Bio 300Z or 304Z, for non-Biologists who wish to qualify for Bio 311A/B or 321A/B to fulfill a Minor programme. It consists of the laboratory section only of Bio 201A/B and it is designed to acquaint the student with the use of the microscope, dissecting and drawing techniques, as well as with representative plant and animal forms and structures. *Laboratory only:* 3 hours per week for one term. (1 credit)

BIOLOGY 304Z
Concepts of Modern Biology

Prerequisites: None. Designed for those with little or no knowledge of biology, this course will introduce non-science students to the diversity of plant and animal life, and to the basic functions of living organisms in relation to environment, reproduction, heredity and evolution. *Lectures:* 3 hours per week for two terms. (6 credits)

BIOLOGY 311A/B
Introductory Botany

Prerequisites: CEGEP sciences. A brief survey of the distribution, morphology and development of selected representatives from various plant groups. Plant life-cycles, certain physiological aspects of plant growth and development and relation of plants to human affairs. *Lectures:* 3 hours per week for one term. *Laboratory:* 3 hours per week for one term. (3 credits)

BIOLOGY 315A
Microbiology I

Prerequisites: CEGEP sciences. Introduction to micro-organisms. History of micro-biology. Structure of viruses, bacteria and fungi. Taxonomy of micro-organisms. Brief discussion of genetics of micro-organisms. Laboratory will illustrate lecture material and introduce methods of handling micro-organisms. *Lectures:* 2 hours per week for one term. *Laboratory:* 3 hours per week for one term. (3 credits)

BIOLOGY 317B
Microbiology II

Prerequisite: Bio 315A. Designed to continue from Bio 315A. Growth, nutrition and metabolism of micro-organisms. Special emphasis on metabolic processes unique to micro-organisms (fermentations, oxidation of inorganic compounds, anaerobic respiration, microbial photo-

synthesis). Their importance in medicine and industry, and their role in biogeochemical processes. *Lectures:* 2 hours per week for one term. *Laboratory:* 3 hours per week for one term. (3 credits)

BIOLOGY 321A/B
Introductory Zoology

Prerequisites: CEGEP sciences. A survey of the major animal phyla. The course will concentrate on the structure and function of representative animals, together with some aspects of their behaviour. *Lectures:* 3 hours per week for one term. *Laboratory:* 3 hours per week for one term. (3 credits)

BIOLOGY 327A
Entomology I

Prerequisites: CEGEP sciences. This course introduces the student to the variety and complexity of insect life. Basic classification is followed by a more detailed study of morphology and anatomy, together with some physiological considerations, including growth and metamorphosis. Other topics such as adaptations for aquatic life, social behaviour, etc. will also be discussed. Laboratories will begin with a field trip, the object of which will be to observe and collect various insect species. The remainder of the lab sessions will complement the lectures. Students are advised to begin an insect collection during the summer months preceding the course. *Lectures:* 2 hours per week for one term. *Laboratory:* 3 hours per week for one term. (3 credits)

BIOLOGY 329B
Entomology II

Prerequisite: Bio 327A. To the initiated student, this course will present an in-depth study of insect behaviour. Topics will include sensory physiology, insects and plants, light and sound production, population dynamics, insect ecology, etc. An attempt will be made throughout the course to establish a web of interrelationships between the structures and functions of various insect parts. Laboratories will involve the use of live animals and the student may be required to spend additional time for certain experiments. *Lectures:* 2 hours per week for one term. *Laboratory:* 3 hours per week for one term. (3 credits)

BIOLOGY 331A
Environmental Biology I

Prerequisites: None. This course examines the principles and concepts of ecosystems, the interaction of organisms and their environment. Energy flow and nutrient cycling in ecosystems, population dynamics and community organization. This course is open to the general student body. *Lectures and tutorials:* 3 hours per week for one term. (3 credits)

BIOLOGY 333B
Environmental Biology II

Prerequisites: None. Designed to follow Bio 331A, the course considers both natural and man-made ecological problems, including various aspects of pollution, resource and waste control vital for human survival as well as man's sociological responsibilities. *Lectures, seminars and tutorials:* 3 hours per week for one term. (3 credits)

BIOLOGY 335A/B
Elementary Genetics

Prerequisites: None. A survey of classical and contemporary developments in the study of heredity with particular attention to human examples. This course is open to the general student body, and is not available for credit to Biology students. *Lectures:* 3 hours per week for either term. (3 credits)

BIOLOGY 341A
Fundamental Nutrition

Prerequisites: None. This course deals with food composition (including vitamins, minerals), its absorption and utilization, the roles of excesses, stress, microbes, toxins, preservatives, residues, drugs, food technology and diets, malnutrition, obesity, aging and other topics. Laboratory will include seminars, movies and projects, field trips. *Lectures:* 2 hours per week for one term. *Laboratory:* 3 hours per week for one term. (3 credits)

BIOLOGY 343B
Applied Nutrition

Prerequisite: Bio 341A. This course describes the needs of individuals in different stages of development, with particular emphasis on current problems in human nutrition. Identification of sources of food-borne diseases and methods of prevention and control will also be treated. Laboratory will include group discussion, speakers, movies, projects. *Lectures:* 2 hours per week for one term. *Laboratory:* 3 hours per week for one term. (3 credits)

BIOLOGY 410Z
Plant Physiology

Prerequisites: Bio 311A/B. A study of vital plant processes with emphasis on the metabolism of carbohydrates, proteins and lipids (membrane characteristics and permeability, enzymes, light and photosynthesis, respiration and fatty-acid oxidation) laboratory experiments cover a broad spectrum of basic physiological concepts and techniques: calorimetry, chromatography, extraction analysis, etc. *Lectures:* 2 hours per week for two terms. *Laboratory:* 3 hours per week for two terms. (6 credits)

BIOLOGY 415A
Biology of Non-Vascular Plants

Prerequisites: Bio 311A/B. A survey of the taxonomy, morphology, life cycles and evolution of representatives of the lower plants (algae, mosses, liverworts). *Lectures:* 2 hours per week for one term. *Laboratory:* 3 hours per week for one term. (3 credits)

BIOLOGY 417B
Biology of Vascular Plants

Prerequisites: Bio 311A/B. Designed to follow Bio 415A, the course surveys the taxonomy, morphology, life cycles and evolution of the higher plants (ferns, seed plants). *Lectures:* 2 hours per week for one term. *Laboratory:* 3 hours per week for one term. (3 credits)

BIOLOGY 420Z
Comparative Vertebrate Anatomy

Prerequisites: Bio 321A/B. A comprehensive study of the development and structure of the systems of a representative series of vertebrates from a comparative and evolutionary point of view, with emphasis on the mammals. Laboratory: survey and dissection of representatives of the principal vertebrate classes. *Lectures:* 3 hours per week for two terms. *Laboratory:* 3 hours per week for two terms. (6 credits)

BIOLOGY 422Z
Invertebrate Zoology

Prerequisite: Bio 321A/B. A comprehensive survey designed to provide a detailed understanding of form and function within the inverte-

brate phyla. Additional topics will include a discussion of current evolutionary theories regarding invertebrates, reproductive and social behaviour, and ecology, especially that of local fauna. *Lectures:* 2 hours per week for two terms. *Laboratory:* 4 hours per week for two terms, and a Fall field trip. (6 credits)

BIOLOGY 424Z
Vertebrate Embryology

Prerequisites: Bio 321A/B. A detailed study, from a comparative point of view, of the developmental processes and organogenesis in representative vertebrate embryos, leading to an understanding of the structure and function of the human systems. *Lectures:* 2 hours per week for two terms. *Laboratory:* 3 hours per week for two terms. (6 credits)

BIOLOGY 430Z
General Genetics

Prerequisites: Bio 311A/B, 321A/B. A study of the principles and processes of plant, animal and human heredity from the classical foundations through the modern to the recent molecular developments; developmental and population genetics, and evolution. Laboratory: directed experiments with Drosophila and other organisms. *Lectures:* 2 hours per week for two terms. *Laboratory:* 3-6 hours per week for two terms. (6 credits)

BIOLOGY 431A
Cytology

Prerequisites: Bio 311A/B, 321A/B, or permission of the instructor. A study of plant and animal cells, their ultrastructures and organelles, and physiology, with microscopic and cytochemical techniques of analysis. *Lectures:* 2 hours per week for one term. *Laboratory:* 3 hours per week for one term. (3 credits)

BIOLOGY 433B
Cytogenetics

Prerequisites: Bio 431A, 430Z or permission of the instructor. A detailed study of plant and animal chromosomes, their structures and normal and abnormal behaviour; species evolution and preservation; various anomalies, ploidy, heterosis, apomixy; human cytogenetics. *Lectures:* 2 hours per week for one term. *Laboratory:* 4-6 hours per week for one term. (3 credits)

BIOLOGY 434Z
Ecology

Prerequisites: Bio 311A/B, 321A/B. A broad survey of theoretical ecology. Description of communities, their structures and functions, succession and climax. The ecosystem concept, energy flow and nutrient cycling within the ecosystem. Growth and regulation of populations. Interaction of the environment with populations and communities. Competition and the niche concept; systems analysis in ecosystems studies. *Lectures:* 2 hours per week for two terms. *Laboratory:* directed projects and field trips. (6 credits)

BIOLOGY 435A
Cellular Metabolism I

Prerequisites: Bio 311A/B, 321A/B, Chem 326A, 328B. The course will deal with the simple metabolism of biomolecules in both plants and animals: A basic study of enzymes and their mode of action; nucleic acids and their role in protein synthesis. Distribution of organelles and their metabolism: cellular oxidations and energetics. *Lectures:* 3 hours per week for one term. (3 credits)

BIOLOGY 437B
Cellular Metabolism II

Prerequisite: Bio 435A. Designed to follow Bio 435A, the course examines the intracellular localization of enzymes, their activity and control from a comparative cellular basis; coenzymes and their importance in intermediary metabolism. Membranes and cell wall synthesis; hormones and their mode of action. Nutritional requirements of organisms. *Lectures:* 2 hours per week for one term. *Laboratory:* 3 hours per week for one term. (3 credits)

BIOLOGY 440Z
Animal Physiology

Prerequisites: Bio 321A/B or permission of the Instructor. An integrated study of basic physiological phenomena of the vertebrate body, with emphasis on the human. The topics discussed include muscle function, nervous system, circulation, respiration, temperature regulation, digestion, metabolism, excretion, and endocrinology. *Lectures:* 2 hours per week for two terms. *Laboratory:* 3 hours per week for two terms. (6 credits)

BIOLOGY 461C
Plant Field Ecology

Prerequisites: Bio 311A/B. For a two-week period during August this course will be held at the Lacolle Centre. It will involve identification of local plant species, methods of sampling of communities, and examination of the pattern of plant communities in the area. Handling of data on populations and communities will be discussed as well as statistics on population distributions. A mixture of formal lectures, organized field studies and informal discussion. Students will be required to hand in a written report after the course has ended. (3 credits)

BIOLOGY 511A
Mycology

Prerequisite: Bio 315A. A detailed study of the morphology and taxonomy of the fungi. Emphasis will be placed on the ecological roles of various groups of fungi and on their economic importance; problems of phylogeny will also be discussed. *Lectures:* 2 hours per week for one term. *Laboratory:* 3 hours per week for one term, including field trips. (3 credits)

BIOLOGY 513B
Microbial Ecology

Prerequisite: Bio 315A. The course is designed to give an understanding of the environment in which microorganisms live, the structure of microbial communities, and the ways in which microbes interact during the processes involved in decomposition and nutrient cycling. Stress will be placed on the ecology of soil microorganisms, though aquatic communities will also be discussed. *Lectures:* 2 hours per week for one term. *Laboratory:* 3 hours per week for one term, including field trips. (3 credits)

BIOLOGY 515A
Plant Growth and Development

Prerequisite: Bio 410Z. Environmental approach to the study of plant growth, differentiation and morphogenesis; hormones and growth regulation; physiology of reproduction, maturation and senescence; temperature and light responses and related phenomena. *Lectures:* 2 hours per week for one term. *Laboratory:* 3 hours per week for one term. (3 credits)

BIOLOGY 517B
Environment and Plant Growth

Prerequisite: Bio 410Z. Examination of the response of selected plant groups to different environmental conditions. Studies will include particular plant responses to changes in temperature and light, water and mineral deficiencies. *Lectures:* 2 hours per week for one term. *Laboratory:* individual projects and seminars. (3 credits)

BIOLOGY 522Z
General Parasitology

Prerequisites: Bio 321A/B; Bio 422Z recommended. A study of the protozoan, helminth and arthropod parasites of man, domestic animals and wildlife. Special emphasis will be placed on the transmission of parasites with reference to the behaviour and ecology of both the host and the parasite. Additional topics will include the evolution of the parasitic way of life, subsequent adaptations and various aspects of the host-parasite relationship. Laboratory: techniques for parasite recovery, basic staining and histological techniques, fecal analysis, identification of parasitic worms, infection of experimental animals. *Lectures:* 2 hours per week for two terms. *Laboratory:* 3 hours per week for two terms. (6 credits)

BIOLOGY 524Z
Neurology

Prerequisite: Bio 420Z. A study of the anatomy and physiology of the nervous systems of vertebrates, especially of the mammals and man. *Lectures:* 2 hours per week for two terms. *Laboratory:* 3 hours per week for two terms. (6 credits)

BIOLOGY 527A
Histology

Prerequisite: Bio 420Z or equivalent or permission of the instructor. A comparative study of the microscopic characteristics of cells, tissues and organ systems of the vertebrates at the histological and cellular levels. *Lectures:* 2 hours per week for one term. *Laboratory:* 3 hours per week for one term. (3 credits)

BIOLOGY 529B
Microscopical Techniques

Prerequisite: Bio 527A. Histological techniques involved in the preparation of various animal tissues for microscopic study; techniques of microscopy and some practical experience in photomicrography. *Lectures:* 1 hour per week for one term. *Laboratory:* 6 hours per week for one term. (3 credits)

BIOLOGY 531A/B
Advanced Genetics

Prerequisite: Bio 430Z. Directed readings and seminars in classical and contemporary genetics; designed to expose the student to research literature and problems, to probe in greater depth areas of particular interest, to develop a critical sense and deepen an understanding of past and current work in this field. *Seminars:* 3 hours per week for either term. (3 credits)

BIOLOGY 542Z
Comparative Animal Physiology

Prerequisites: Bio 440Z or equivalent; Bio 437B or equivalent Biochemistry, or permission of the Instructor. The course is designed on a function-system basis, and deals with a comparative study of physiological processes in animals, their behaviour and physiological adaptations. *Lectures and seminars:* 2 hours per week for two terms. *Laboratory:* individual projects in special topics. (6 credits)

BIOLOGY 565A
Limnology

Prerequisite: Bio 434Z. A survey course covering physical and chemical properties of freshwater, the biotic communities of lakes and running water. *Lectures:* 3 hours per week for one term. (3 credits)

BIOLOGY 567B
Fish Biology

Prerequisite: Bio 420Z. A study of the physiological and anatomical characteristics of fish, their feeding and mating behaviour, and special adaptations. *Lectures:* 3 hours per week for one term. (3 credits)

BIOLOGY 590Z
Problems in Biological Research

Prerequisite: candidacy for the Honours degree. Lectures and seminars on methods of researching scientific literature, the planning, conduct, writing and reporting of research. The core of the course will be a project selected by the student in consultation with and conducted under the supervision of a faculty member of the department (6 credits)

51.5 Department of Bio-Physical Education

Associate Professor and Chairman
E. F. ENOS

Associate Professor
G. C. KEILTY

Assistant Professors
G. T. MORAN
B. PETRIE

WM. SELLERS
A. WRIGHT

Lecturer
R. DESJARDINS

51.5.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1.

The superscript indicates credit value.

90 BSc Specialization in Bio-Physical Education

Year I
12 Bio-PE L201[3], L211[3], L213[3], L261[3]
9 Bio 321A[3], Chem 326A[3], 328B[3]
9 Elective credits
Year II
21 Bio-PE L310[2], (L331[3] OR L333[3],) L351[3], L353[3], L355[3], L357[3]
9 Elective credits
Year III
27 Bio-PE L401[3], L411[3], L412[6] or L413[3] and L415[3], L421[3], L451[3], L453[3], and one of the following: L462[6], L464[6], L466[6] or L468[6]
3 Elective credits

90 BSc Major in Bio-Physical Education

Year I
12 Bio-PE L201[3], L211[3], L213[3], L261[3]
9 Bio 321A[3], Chem 326A[3], 328B[3]
9 Elective credits
Year II
12 Bio-PE L351[3], L353[3], L355[3], L357[3]
18 Elective credits
Year III
9 Bio-PE L411[3], L451[3], L453[3]
21 Elective credits

90 BSc Major in Bio-Physical Education with Bio-Chemistry Component

Year I
12 Bio-PE L201[3], L211[3], L213[3], L261[3]
15 Bio 321A/B[3], Chem 322Z[6], 336Z[6]
3 Elective credits
Year II
18 Bio-PE L331[3] or L333[3], L351[3], L353[3], L355[3], L357[3]
6 Chem 491A[3], 493B[3]
9 Elective credits
Year III
15 Bio-PE L401[3], L451[3], L453[3], and one of the following: L466[6] or L468[6]
6 Chem 590Z[6]
6 Elective credits

24 Minor in Athletic Training

Year I
9 Bio 341A[3], L343B[3], Bio-PE L251[3]
Year II
9 Phys 351A[3], Bio-PE L335[3], L337[3]
Year III
6 Bio-PE L436[6]

33 Certificate in Outdoor Education

6 Bio 331A[3], 333B[3]
6 Geol 201A[3], 203Y[3]
3 Geog L275[3]
18 Bio-PE L370[6], L470[6], L472[6]

24 Environment, Health and Adaptation Minor

This Minor has been developed especially for non-Science Majors. It is open to students from all Faculties.
3 Bio-PE L211[3]
3 Bio 331A[3], or Bio 335B[3]
3 Phys 351A[3]
12 Bio-PE L331[3], L333[3], L490[6]

Health Education

The courses listed below are offered through the Department of Bio-Physical Education in conjunction with Health Education.
Bio-PE L480[6], L481[3], L482[6], L483[3], L484[6], L486[6], L488[6]

Recreation and Leisure Studies

The courses listed below are open to all students, in particular Bio-PE Students desiring an increased competency in the field of Recreation and Leisure Studies.
Bio-PE L241[3], L342[6], L426[6], L464[6]
A BA programme in Recreation and Leisure Studies may be followed through the Centre for Interdisciplinary Studies. § 51.17.2

51.5.2 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.5.

BIO-PHYSICAL EDUCATION L201
Philosophical and Sociological Foundations of Health, Physical Education and Recreation

The course involves a study of the nature and meaning of health, physical education and recreation. Significant effects of philosophical tenets on the development of the disciplines are examined. Subject to critical analyses are the basic concepts of the philosophical schools of idealism, pragmatism and realism. The socializing effects of sports, physical education and recreational activities also are investigated. *Lectures, Seminars & Field Study:* 3 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L211
Introduction to Motor Learning

The course commences with a brief introduction to statistical methodology. Consideration is given to the capacities people have for processing information. It attempts to demonstrate how these capacities influence performance, the acquisition of skills and, in particular, sports skills. Also considered are the effects of the following factors: decision-making, information theory, reaction time, psychological refractory period, selective attention, memory and others. *Lectures & Seminars:* 3 hours per week. *Labs:* 2 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L213
Motor Learning and Human Performance

Prerequisite: Bio-PE L211 or consent of professorial staff. The principle aim of this course is to examine in more depth the topics of learning. Major consideration is given to the effects that feedback and manipulation may have on the acquisition and improvement of sports skills in the performance. *Lectures & Seminars:* 3 hours per week. *Labs:* 2 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L241
Recreation and Leisure in Contemporary Society

The course provides a basis for understanding recreation and leisure as increasingly important aspects of our culture. In an era of rapidly changing life styles, with a high incidence of anxiety and frustration, the value of worthy use of leisure time in maintaining mental and physical health is presented. Topics discussed include: Education for leisure; the scope of the field of recreation, work ethic, leisure ethic, the role of leisure and recreation in satisfying man's needs, and leisure as an agent for change. *Lectures & Seminars:* 3 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L251
Sports Science

An introduction is provided to the science of sports. Various physiological parameters influencing and limiting activity are studied. The influence of personal characteristics, societal and other factors on human performance are investigated. (3 credits)

BIO-PHYSICAL EDUCATION L261
Principles and Techniques of Physical Education and Recreation Skills

An understanding is provided of skill development theories, practices and teaching sequences. Scientific principles of sport techniques are applied in activity periods. All popular North American team and individual sports are covered. To successfully complete the course, students must demonstrate a proficiency which will permit them to teach the skills involved in these sports. *Labs:* 12 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L310
Methods and Materials in Physical Education and Recreation

Prerequisites: Bio-PE L211, L213, L261. In the course, teaching is approached as a science. Consideration is given to the needs, interests and characteristics of elementary school age children. Based on this, scientific teaching methods and materials most conducive to learning for this age group are examined. The latest modes of movement education are of major concern. Basic skills and the teaching sequences involved are reviewed. During laboratory sessions, students are afforded the opportunity to teach children and to analyze the effects of various methodological techniques. *Lectures:* 2 hours per week. *Labs:* 4 hours per week. (6 credits)

BIO-PHYSICAL EDUCATION L331
Health Science

The subject matter is approached with "health" viewed as the optimal functioning of the human organism. The course synthesizes and applies knowledge from biological, psychological and medical sciences to present the student with a comprehensive understanding of factors influencing personal health. Areas covered include hereditary considerations, growth and development patterns, human sexuality, nutrition, fitness, mental health, diseases, drugs, pathology and environmental ecology. *Lectures:* 3 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L333
Personal and Community Health Problems

The course examines causes, symptoms and proposes plausible steps which can be taken towards solving individual and community health problems. Consideration is given to alcoholism, drug abuse, mental illness, smoking, sex education, communicable and non-communicable diseases, pollution, industrial and occupational health hazards. *Lectures & Seminars:* 3 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L335
Prevention of Athletic Injuries

An examination is undertaken of age, body structure, heredity and acquired factors in relation to athletic injuries. Reviewed are injuries to the muscular, skeletal and other systems in specific sports and under various conditions. The effects of aerobic, anaerobic, flexibility and strength conditioning programmes in the prevention of traumatic sports injuries and chronic ailments are studied. Research findings are surveyed in the area of testing and fitting of equipment as they relate to injury prevention and safety. *Lectures:* 3 hours per week. *Labs:* 3 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L337
Emergency Care of Athletic Injuries

Prerequisites: Bio-PE L351 and L353. The course is concerned with emergency situations that may occur in athletics, physical education and recreation. Among the situations discussed are acute cardiac problems including angina

pectoris, cardiopulmonary resuscitation and cardiac arrest, management of bleeding wounds, fractures, cerebro-vascular disorders, convulsive attacks, acute abdominal disorders, transportation and movement of injured victims, complications resulting from dehydration and heat stress, pulmonary problems including asthmatic attacks and asphyxiation. Techniques involved in rescue procedures related to accidents during outdoor activities are also examined. *Lectures:* 2 hours per week. *Lab:* 2 hours per week. Text: Grant & Murray; *Emergency Care.* (3 credits)

BIO-PHYSICAL EDUCATION L342
Principles and Practices of Recreational Services

The course is concerned with the fundamental concepts governing the field of recreation. A thorough examination is conducted of the many aspects of recreation programs in urban and rural settings including: active and social components, principles of leadership, supervision, evaluation, surveying interests, classification, co-ordination and other planning factors. Model recreational programs are surveyed in community, camp, school and rehabilitation centres. *Lectures, Seminars & Field Study:* 4 hours per week. (6 credits)

BIO-PHYSICAL EDUCATION L351
Structural Human Anatomy

The course is a study of gross and functional anatomy, with major emphasis on the skeletal, muscular and nervous systems. *Lectures:* 3 hours per week. *Labs and Cadaver Demonstrations:* 3 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L353
Human Physiology

Prerequisites: Bio 321A and a university level chemistry course. The course analyzes the functional organization and integration of the muscular system and of the nervous and hormonal systems controlling movements in man. Due to the close relationships, the special senses and the reproductive systems also are examined in this course. *Lectures:* 3 hours per week. *Labs:* 3 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L355
Systemic Human Anatomy

Prerequisite: Bio-PE L351. The course is a study of the organ systems of the human body with major emphasis on the circulatory, respiratory, digestive, excretory, reproductive and endocrine systems. *Lectures:* 3 hours per week. *Labs and Cadaver Demonstrations:* 3 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L357
Cardiovascular—Respiratory Physiology

Prerequisite: Bio-PE L353. The major concern of the course is to examine the functional organization and integration of the cardiovascular and respiratory systems which provide nutrients for man's energy metabolism. Related to this, the dynamics of metabolism processes, digestive and excretory systems also are analyzed. *Lectures & Seminars:* 3 hours per week. *Labs:* 3 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L370
Scientific Foundations of Outdoor Education and Recreation

The course examines outdoor recreational facilities and other outdoor settings as an extension of the school. Their utilization is studied in terms of providing direct laboratory experiences for building concepts and developing a concern about man and his natural environment. The development of Outdoor Education and Recreation programmes are analyzed. The areas of health, physical education and recreation are used as the core of an interdisciplinary study of the outdoors. Subject to review are the areas concerning health, physical education and recreation including the effects of pollution, recreational and outdoor fitness activities; the teaching of science in the outdoors including: conservation, ecology of a woodland, pond and bog; study of plants and animals in their natural habitat; water resources; problems of erosion; rock and tree identification. *Lectures, Seminars and Field Study:* 6 hours per week. (6 credits)

BIO-PHYSICAL EDUCATION L393
Selected Topics in Bio-Physical Education

Prerequisite: Consent of professorial staff. This course focuses on current topics of interest in the field of Bio-Physical Education. The content will dependent upon the theme designated by the department, when the course is offered. The course will draw upon the expertise of individuals and visiting guest lecturers. (3 credits)

BIO-PHYSICAL EDUCATION L395
Selected Topics in Bio-Physical Education

Prerequisite: Consent of professorial staff. A student may repeat Bio-PE L393, provided that the content is different, by registering for credits under Bio-PE L395. (3 credits)

BIO-PHYSICAL EDUCATION L397
Selected Topics in Bio-Physical Education

Prerequisite: Consent of professorial staff. This course focuses on current topics of interest in the field of Bio-Physical Education. The content will dependent upon the theme designated by the department, when the course is offered. The course will draw upon the expertise of individuals and visiting guest lecturers. (3 credits)

BIO-PHYSICAL EDUCATION L399
Selected Topics in Bio-Physical Education

Prerequisite: Consent of professorial staff. A student may repeat Bio-PE L397, provided that the content is different, by registering for credits under Bio-PE L399. (3 credits)

BIO-PHYSICAL EDUCATION L401
Adapted Corrective and Rehabilitative Physical Education and Recreation

Programmes and activities for individuals with physical, mental, social and/or emotional disfunctions are analyzed in the course. An exploration is conducted of the nature and causes of common handicaps including orthopaedic, cardiopathic, visual, auditory, mental retardation, cerebral palsy and general learning disabilities. Current adaptive, corrective and remedial techniques are reviewed in laboratory sessions, students are provided with the opportunity to teach special activities and exercises to handicapped children. *Lectures:* 2 hours per week; *Labs:* 4 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L411
Tests, Measurements and the Research Processes in Physical Education and Recreation

Prerequisites: Bio-PE L310 and a post secondary school math course, preferably Math 310Z. The course provides an understanding of standardized tests utilized by professionals in the fields of health, physical Education and Recreation. Procedures involved in data collection, interpretation and statistical methodology

are analyzed. *Lectures:* 3 hours per week. *Labs:* 3 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L412
Advanced Methods and Materials in Physical Education and Recreation

Prerequisite: Consent of professorial staff. Teaching is approached as a science. The needs, interests and characteristics of adolescents and young adults are studied. Based on these factors, analysis of appropriate teaching methods for this age group are conducted. Advanced skills and the teaching sequences involved are reviewed. The application of principles of motor learning, skill testing, cinematography, closed-circuit television and other audio-visual aids in teaching and coaching is considered. In laboratory periods, students are given the opportunity to teach adolescents and young adults and to study the effect of various methodological techniques. *Lectures:* 2 hours per week. *Labs:* 4 hours per week. (6 credits)

BIO-PHYSICAL EDUCATION L413
Physical Education in the Early Childhood Curriculum I: Psycho-Motor Learning

The psychomotor domain of learning in young children is of major concern in this course. Principles of perceptual motor feedback processes are studied in detail. Application of these principles to motor learning in the early childhood curriculum is analyzed. The interrelationships of cognitive and psychomotor development are studied for symbiotic cause and effect relationships. *Lectures:* 2 hours per week. *Labs:* 2 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L415
Physical Education in the Early Childhood Curriculum II: Eurhythmics

The utilization of rhythmic activities as a learning mode in the early childhood curriculum is studied from both a practical and theoretical perspective. Students examine rhythms as a means of developing kinesthetic awareness, understanding the role of coordination and timing in the performance of complex movement patterns. Interaction with young children to discover first hand how rhythms are involved in developmental sequences constitutes the practical aspects of the course. *Lectures:* 2 hours per week. *Labs:* 2 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L421
Organization and Administration of Physical Education and Recreation Programmes and Facilities

The course examines and applies fundamental concepts of business administration to the field of physical education and recreation. Topics covered include organizational structures, management systems, equipment purchasing and control, promotion, public relations, theories of motivation and scheduling which can be applied in the school and community. *Lectures and Seminars:* 3 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L426
Organization and Administration of Recreation Programmes and Facilities

The course provides in-depth analysis of business practices utilized in the efficient management of recreation programmes and facilities. Principles of organization, public relations, purchasing, scheduling, and utilization of facilities are studied. Special consideration is given to the financial areas of budget preparation, basic accounting procedures, cost estimation and the control of funds. The course includes an extensive field study programme in which the students are exposed to a variety of administrative procedures being used by professionals in the field of recreation. *Lectures:* 2 hours per week. *Field Study Labs:* 4 hours per week. (6 credits)

BIO-PHYSICAL EDUCATION L433
Rehabilitation and Treatment of Athletic Injuries

The role and relationship of the sports therapist to the physician, nurse and physiotherapist in the rehabilitation and treatment of athletic injuries is studied. Subject to review are thermal and cryotherapy, and the use of diathermy, ultrasonic, whirlpool, defibrillator and other equipment. Emergency treatment, methods of transportation and legal aspects are discussed. An introduction also is provided to basic counselling techniques. *Lectures:* 3 hours per week. *Labs:* 3 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L436
Sports Medicine

Prerequisites: Bio-PE L335 and L433. An introduction to the application of medical science to the field of sports is provided. Select topics in endocrinology including hormonal imbalance, fatigue, depression, aggression and the jet fatigue syndrome in relation to athletic performance. Discussed are disturbances of the gastro-intestinal tract and dietary considerations. Gynecological problems, pharmacology, including the effect of ergogentic aids, current medical flexible casting and taping techniques are covered. (6 credits)

BIO-PHYSICAL EDUCATION L451
Kinesiology

Prerequisites: Bio-PE L351 and a post secondary school physics course preferably Physics 351. The course involves a study of anatomical, mechanical and descriptive analyses of basic human movement and specific sport skills. Included is an examination of the skeletal, muscular and the nervous systems and their application to the teaching and coaching of efficient motor performance. *Lectures:* 3 hours per week. *Labs:* 3 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L453
Physiology of Exercise

Prerequisites: Bio-PE L355 and L357, or Biology 440. In the course, physiological principles are applied to man's acute and chronic adaptation to muscular activities. The adaptation and integration of the body systems in the performance of exercise and sports activities are considered. Also examined are the changes that occur as a result of physical training, age and environment. Laboratory sessions include the measurement of various physiological parameters during exercise. *Lectures and Seminar:* 3 hours per week. *Labs:* 3 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L455
Preventive Medicine and Geriatrics

Prerequisite: Bio-PE L453, the equivalent, or consent of instructor. The course focuses on the physiological, psychological and sociological needs of adults, in particular, geriatric patients. The aging process is examined as it influences the choice of physical activities. In addition, the preventive aspect of physical activity and its effects on the medical problems associated with aging are studied. Methods of

implementing and evaluating preventive programmes are analyzed. Disorders of the metabolic processes, neuromuscular, cardiovascular and respiratory systems receive prime consideration. *Lectures:* 2 hours per week. *Labs:* 3 hours per week. (3 credits)

BIO-PHYSICAL EDUCATION L462
Teaching Internship

Prerequisite: The course is open to University III level Bio-Physical Education Majors and Recreational and Leisure Studies Majors who have followed the programming option of a Recreation and Leisure Studies Major. The practicum begins with seminar sessions, during which each student formulates lesson plans, units of instruction, scientific teaching methods and means of evaluation. This aspect of the course is completed in cooperation with and subject to the approval of participating institutions and instructors. Subsequently, students assume a supervised teaching position for a six-week 240-hour period. The teaching internship commences immediately following the student's last final examination. (6 credits)

BIO-PHYSICAL EDUCATION L464
Recreation Internship

Prerequisite: This course is open only to University III level Bio-Physical Education or Recreation and Leisure Studies Majors. In consultation with their mentors, students are given the opportunity to study theoretical and practical problems confronting professionals in the field of Recreation. The course offers a supervised period of work with a select organization. Each student, during seminar sessions, formulates a study proposal. The practicum commences based upon the approved proposal, immediately following the student's last final examination. The course involves a minimum of a six-week 240-hour period. (6 credits)

BIO-PHYSICAL EDUCATION L466
Para-Medical Internship

Prerequisite: The course is open only to University III level Bio-Physical Education or Recreation Majors. In consultation with their advisor, students are given the opportunity to study theoretical and practical problems confronting para-medical professionals in the field. The course offers a supervised period of work as sports therapist, activity leader in a hospital or rehabilitative centre, a technician in a physiological evaluation laboratory or related position. Each student, during seminar sessions, formulates a study proposal, immediately following the student's last final examination. The course involves a minimum of a six-week 240-hour period. (6 credits)

BIO-PHYSICAL EDUCATION L468
Research Internship

Prerequisite: The course is open only to University III level Bio-Physical Education and Recreation and Leisure Studies Majors. In consultation with their adviser, students are given the opportunity to study theoretical, practical and scientific problems related to the fields of Bio-Physical Education, Health and Recreation. Each student, during seminar sessions, formulates a study proposal. The practicum commences, based upon the approved proposal, immediately following the student's last final examination. The practicum involves working as a member of a research team and reporting the experience. The course involves a minimum of a six-week 240-hour period. (6 credits)

BIO-PHYSICAL EDUCATION L470
Outdoor Education in the Elementary School Curriculum

The course offers a comprehensive analysis of outdoor education at the elementary school level. Examined are the aims and objectives of outdoor education, scientific methods and materials utilized, the organization and administration of model programs, innovative units of instruction and means of evaluation of outdoor education courses in camps, elementary schools and municipal recreation programs. *Lectures, Labs, Seminars, Outdoor Labs and Field Study:* 5 hours per week. (6 credits)

BIO-PHYSICAL EDUCATION L472
Outdoor Education in the Secondary School Curriculum

The course provides an overview of outdoor education programs at the secondary school level. Existing outdoor education courses in camps, high schools and recreation departments are critically reviewed. New concepts, planning and development of units of instruction, problem areas and other facets of outdoor education for secondary school age students are examined. *Lectures, Seminars, Outdoor Labs and Field Study:* 6 hours per week. (6 credits)

BIO-PHYSICAL EDUCATION L480
(Also given as Health L472)
Special Workshop Human Sexuality

The course investigates "Psychological Concepts of Human Sexuality" as they influence Family Planning and Sex Education: the study will explore variations in sexual patterning, therapy and counselling, biological, anthropological and ontological perspectives of sexuality. Open to educators, guidance counsellors, nurses, social workers and psychologists. (6 credits)

BIO-PHYSICAL EDUCATION L481
(Also given as Health L323 and Nursing L323)
Teaching Strategies for the Health Professional

Prerequisites: Health L209 and Nursing L320, or permission of the Department. This course is designed to meet the needs of individuals who are involved in education programmes, i.e., schools, industry, clinics, volunteer agencies, in-service programmes, etc., aimed at promotion and maintenance of health, prevention of disease and rehabilitation. (3 credits)

BIO-PHYSICAL EDUCATION L482
(Also given as Health L212)
Clinical Epidemiology and Bio-Statistics

An introductory course on the methods of measuring the distribution and determinants of disease frequency in Man. Measures of population health and health services utilization will be covered. Variability and the need of statistics will be stressed. (6 credits)

BIO-PHYSICAL EDUCATION L483
(Also given as Health L319)
Drug Use and Abuse

The course is structured to introduce non-medical personnel to the modern concepts of drug therapeutics and to discuss the consequences of use and abuse of drugs. The drug classes will include steroids, antibiotics, minor and major psychotropics and the potential chronic abuse of drugs such as amphetamines, barbiturates, hallucinogens and alcohol. (3 credits)

BIO-PHYSICAL EDUCATION L484
(Also given as Andragogy L320, Health L320, Nursing L320)
Interviewing Techniques and Counselling Concepts

Prerequisite: Health L209 or equivalent. A course in which the student examines the dynamics of helping interviews, models of human effectiveness, and theories of counselling. The variety of issues to be covered include the enhancement of specific skills through different training experiences, a proper emphasis on self-understanding, an awareness of the role of philosophy, ethical standards and research. This course demands a high level of observation, participation and involvement from each student. (6 credits)

BIO-PHYSICAL EDUCATION L486
(Also given as Andragogy L408 and Health L408)
Group Structure and the Role of the Community Worker

The course is developed to assist volunteers, interested citizens, social workers, recreation directors and individuals with no formal health training, working as part of a multidisciplinary team, to identify their roles in order to play a more effective part as a community worker. Assignments will be directed toward practical applications of field work to problem-solving in a field of their choice, i.e., post-retirement, rehabilitation of drug addicts and alcoholics, single parents, etc. (6 credits)

BIO-PHYSICAL EDUCATION L488
(Also given as Health L208)
Nutrition in the '70's

This course will study the influence of socio-economic and political systems on the nutritional status of the individual and the interrelationship between food habits and the cultural, social and psychological aspects of life. Topics will include diet-related problems such as obesity, heart disease, faulty eating habits, malnutrition, etc. Food budgeting for all levels of the socio-economic structure will be examined. (6 credits)

BIO-PHYSICAL EDUCATION L490
Psycho-Motor and Physiological Adaptations to the Environment

Prerequisites: Bio-PE L211, Bio 331A, 333B or 335B, Phys 351B, Bio-PE L331 and L333. The course is designed to provide an opportunity to analyze the functioning of one's body and its adaptation to various environmental factors. Major consideration is given to how man responds to various stress factors, to how he understands them and what can be done to relieve or diminish the effects of stress. The role of fitness components in coping with stress, including cardio-respiratory efficiency, muscular endurance, strength, theories of relaxation and body alignment are examined. Also the application of psycho-motor concepts of: self image, body awareness, and spatial orientation are reviewed. *Lectures:* 2 hours per week. *Labs:* 3 hours per week. (6 credits)

BIO-PHYSICAL EDUCATION L491
Independent Study in Bio-Physical Education

Prerequisite: Permission of the Department. Students will work on topic(s) chosen in consultation with their department supervisor. The study can include readings, field studies, interviews and field work. An in depth report of the activities conducted by the student will be presented to the supervisor upon completion of the course. (6 credits)

BIO-PHYSICAL EDUCATION L493
Advanced Topics in Bio-Physical Education

Prerequisite: Consent of professorial staff. This course focuses on advanced topics of interest in the field of Bio-Physical Education. The content will be dependent upon the theme designated by the department when the course is offered. The course will draw upon the expertise of individuals and visiting guest lecturers. (3 credits)

BIO-PHYSICAL EDUCATION L495
Advanced Topics in Bio-Physical Education

Prerequisite: Consent of professorial staff. A student may repeat Bio-PE L493, provided that the content is different, by registering for credits under Bio-PE L495. (3 credits)

BIO-PHYSICAL EDUCATION L497
Advanced Topics in Bio-Physical Education

Prerequisite: Consent of professorial staff. This course focuses on advanced topics of interest in the field of Bio-Physical Education. The content will be dependent upon the theme designated by the department when the course is offered. The course will draw upon the expertise of individuals and visiting guest lecturers. (3 credits)

BIO-PHYSICAL EDUCATION L499
Advanced Topics in Bio-Physical Education

Prerequisite: Consent of professorial staff. A student may repeat Bio-PE L497, provided that the content is different, by registering for credits under Bio-PE L499. (3 credits)

The following course is a university level course which was offered in the year indicated but which did not appear in the official Calendar.

1976 (Summer)
BIO-PE 599A
The Application of Science to Sport at the XXI Olympiad
(3 Credits)

51.6 Department of Chemistry

Associate Professor and Chairman
M. DOUGHTY

Professor
T. NOGRADY

Associate Professors
K. EKLER
D. McELCHERAN
R. H. PALLEN
G. J. TRUDEL
R. H. ZIENIUS

Assistant Professors
M. BALDWIN
M. G. HOGBEN
J. PARKES

Lecturer
D. HUI

51.6.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1.

The superscript indicates credit value.

NOTE: Elective means credits by choice outside Science. Science Elective means credits by choice outside Chemistry but inside Science. Chemistry Elective means credits by choice inside Chemistry.

105 BSc Honours in Chemistry

Students seeking admission to the Honours programme on or after June 1st, 1977 will be bound by the Honors requirements outlined in § 16.2.4 of this Calendar. Students who already had Honours status by June 1st, 1977 will continue to be governed by the requirements which applied at the date of their admission to the Honours programme.

Year I
24 *Chem 312A³, 314B³, 322Z⁶, 336Z⁶, 342A³, 344B³*
6 *Math 332Z⁶*
6 *Elective credits*
Year II
24 Chem 422Z⁶, 432Z⁶, 433A³, 435B³, 442B³, 444A³
3 Sc Elective credits
6 Elective credits
Year III
21 Chosen from Chem 412A³, 423B³ or 534A³, 531B³, 532Z⁶, 552Z⁶
9 Chem Elective credits
6 Elective credits

96 BSc Specialization in Chemistry

Year I
24 Chem 312A³, 314B³, 322Z⁶, 336Z⁶, 342A³, 344B³
6 Math 332Z⁶
6 Elective credits
Year II
21 Chem 422Z⁶, 433A³, 442B³, 444A³, 452Z⁶
3 Sc Elective credits
6 Elective credits
Year III
12 Chem 412A³, 432Z⁶, 435B³
9 Chem Elective credits
3 Sc Elective credits
6 Elective credits

90 BSc Specialization in Biochemistry and Medicinal Chemistry

Year I
18 Chem 322Z⁶, 338Z⁶, 342A³, 344B³
6 Bio 311A³, 321B³
3 Math 301B³
6 Elective credits
Year II
9 Bio 315A³, 440Z⁶
21 Chem 425A³, 427B³, 444A³, 445A³, 447B³, 491A³, 493B³
Year III
18 Chem 590Z⁶, 592Z⁶, 594Z⁶
3 Sc Elective credits
6 Elective credits

90 BSc Major in Chemistry*

Year I
12 Chem 312A³, 314B³, 322Z⁶
6 Math 332Z⁶
12 6 credits from Minor discipline and 6 Elective credits
Year II
12 Chem 336Z⁶ or 338Z⁶, 342A³, 344B³
18 6 credits from Minor discipline and 12 Elective credits
Year III
12 Chem 412A³, 422Z⁶, 433A³, 435B³, 442B³, 444A³, 452Z⁶, 491A³, 493B³
12 12 credits from Minor discipline
6 Elective credits

**NOTE: The Major in Chemistry must be combined with a programme in another discipline, normally a Minor.*

24 Minor in Chemistry

Open only to students in programmes other than Science.

6 Chem 210Z[6]
18 Chosen from Chem 300Z[6], 315A[3], 317B[3], 326A[3], 328B[3], 411B[3], 452Z[6]

24 Minor in Chemistry (Science)

24 Chosen from Chem 312A[3], 314B[3], 322Z[6], 336Z[6] or 338Z[6], 342A[3], 344B[3], 412A[3], 422Z[6], 433A[3], 435B[3], 442B[3], 444A[3], 452Z[6], 491A[3], 493B[3]

51.6.2 COURSE DESCRIPTIONS

CHEMISTRY 210Z
General Chemistry

Pre-university course. Principles of chemistry, molecular and atomic theories, balancing equations, valence, oxidation-reduction, nature and concentrations of solutions, chemical equilibrium, ionization constants, solubility products, common ion effect, pH, formation and dissolution of precipitates, complex ions, theory of acids and bases, periodic table. *Lectures:* 3 hours per week both terms. *Labs:* 3 hours per week both terms. (6 credits) *NOTE C/See § 200.5*
NOTE: This course may not be taken for university credit by Chemistry students.

CHEMISTRY 300Z
(Also given as Interdisciplinary Studies L201)
Concepts in Science

Prerequisites: None. An elective course for students outside the science discipline who perceive that a lack of science background may alienate them from much of the world's activities and writing. The aim of the course is to learn the fundamental principles and concepts within the physical sciences: heat, light, atomic structure, chemical principles. Newtonian versus quantum mechanics, relativity, life, the universe and its structure. Emphasis will be placed upon understanding the nature of science, applying the principles to the practical disciplines of astronomy and photography. Mathematization will be kept to a minimum. *Lectures:* 3 hours per week, two terms, plus *occasional labs.* (6 credits)

CHEMISTRY 312A
Introductory Inorganic Chemistry I

Prerequisite: Chem 210Z. This course covers the following topics: development of atomic structure, wave mechanical orbitals, periodicity of properties. Properties of ionic compounds, covalent compounds - molecular orbital treatment. Spectroscopy. Chemistry of the non-transitional elements and relation to atomic structure. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. Text: Day and Delbin: *Theoretical Inorganic Chemistry* (Van Nostrand) (3 credits)

CHEMISTRY 314B
Introductory Inorganic Chemistry II

Prerequisite: Chem 312A. This course covers the following topics: development of atomic structure, wave mechanical orbitals, periodicity of properties. Properties of ionic compounds, covalent compounds - molecular orbital treatment. Spectroscopy. Chemistry of the non-transitional elements and relation to atomic structure. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. Text: Day and Delbin: *Theoretical Inorganic Chemistry* (Van Nostrand) (3 credits)

CHEMISTRY 315A
Photographic Chemistry I

Prerequisite: Non-Science students, preferably with some high school chemistry. This is a combined lecture and laboratory course in photographic chemistry. It is to be taken in conjunction with Physics 315A/317B. Basic chemical principles in the study of the photographic process. Factors affecting the control of development and some chemical reactions involved in the photographic process will be discussed and demonstrated. *Lectures and lab:* 3 hours per week, 1st term. (3 credits)

CHEMISTRY 317B
Photographic Chemistry II

Prerequisite: Chem 315A. This is the successive part of Chem 315A. Manufacturing of photographic emulsion, developer composition, fixer composition, fixation and washing; reversal processing; mechanism of latent image formation and the theory of development will be discussed and demonstrated. *Lectures and Lab:* 3 hours per week, 2nd term. (3 credits)

CHEMISTRY 322Z
Organic Chemistry Theory

Prerequisite: Chem 210Z. A basic course in organic chemistry, it establishes a firm and thorough basis of bonding theory, stereo-chemistry and the correlations of molecular structure with reactivity before discussing organic reactions from a mechanistic point of view. The course is the first half of a four-term programme in organic chemistry. *Lectures:* 3 hours per week for two terms. *Lab:* 3 hours per week, both terms. Text: Morrison and Boyd: *Organic Chemistry* (3rd ed) Helm Kamp and Johnson: *Selected Experiments in Organic Chemistry* (Freeman & Company, 2nd ed) (6 credits)

CHEMISTRY 326A
Introductory Organic Chemistry I

Prerequisite: CEGEP Chem 201, or 210Z, or equivalent. An introductory organic chemistry course with biological emphasis, covering concepts of molecular structure, stereochemistry, basic reaction mechanisms, reactions of the common functional groups and practical applications to areas such as detergents, foods, drugs and compounds of biological interest. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. (3 credits)

CHEMISTRY 328B
Introductory Organic Chemistry II

Prerequisite: Chem 326A. An introductory organic chemistry course with biological emphasis, covering concepts of molecular structure, stereochemistry, basic Reaction mechanisms, reactions of the common functional groups and practical applications to areas such as detergents, goods, drugs and compounds of biological interest. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. (3 credits)

CHEMISTRY 336Z
Physical Chemistry

Prerequisite: Chem 210Z. Treatment of properties of gases. Kinetic molecular theory of gases. First law of thermodynamics, thermochemistry, entropy and the second and third laws of thermodynamics. Free energy and chemical equilibria. Properties of liquids, crystals, phase equilibria, the colligative properties,

the rates and mechanisms of chemical reactions, the nature of electrolytes in solution. The thermodynamics of solutions of electrolytes. *Lectures:* 3 hours per week, for two terms. Text: Barrow: *Physical Chemistry* (McGraw-Hill, 3rd ed) (6 credits)

CHEMISTRY 338Z
Physical Chemistry for Biochemistry Degree Students

Prerequisite: Chem 210Z. Thermodynamics heat, work, energy, free energy and chemical equilibria. Properties of liquids. Transport processes: iffusion, sedimentation, viscous flow. Properties of electrolyte and non-electrolyte solutions. Chemical kinetics. *Lectures:* 3 hours per week for two terms. (6 credits)

CHEMISTRY 342A
Analytical Chemistry I

Prerequisite: Chem 210Z. Also Chem 322 or 326/328, and Chem 336, unless taken concurrently. Treatment of analytical data. Gravimetric and volumetric analysis. Acid base and oxidation-reduction titrations. Fundamentals of electrochemical methods. Precipitation and complexometric titrations. The laboratory provides experience in the use of volumetric and gravimetric methods of analysis. Problems form an integral part of this course. *Lectures:* 3 hours per week, first term. *Lab:* 3 hours per week, first term. Texts: Peters, Hayes and Hieftje: *Chemical Separations and Measurements* (Saunders), and R. H. Zienius: *Analytical Chemistry — A Laboratory Manual* (3rd ed) (3 credits)

CHEMISTRY 344B
Analytical Chemistry II

Prerequisite: Chem 342A. Introduction to instrumental methods of analysis including emission spectroscopy, atomic absorption spectrophotometry, visible and ultraviolet spectrophotometry, infrared spectroscopy, nuclear magnetic resonance spectroscopy, and fluorescence spectroscopy. Problems, including interpretation of simple IR and NMR spectra, form an integral part of this course. The laboratory provides experience in the use of spectroscopic and optical instruments. *Lectures:* 3 hours per week, second term. *Lab:* 3 hours per week, second term. Texts: Willard, Merritt and Dean: *Instrumental Methods of Analysis* (Van Nostrand, 5th ed) and R. H. Zienius: *Instrumental Analysis — A Laboratory Manual* (2nd ed) (3 credits)

CHEMISTRY 392B
Selected Topics in Chemistry

Content will depend on the theme designated by the Department, which varies from year to year. (3 credits)

CHEMISTRY 411B
Environmental Chemistry

Prerequisite: Chem 210Z or equivalent. General aspects of environment and ecology; cycles in nature. The chemistry of pollution, air-pollution, water pollution, water treatment. Compounds treated: oxides of carbon, nitrogen and sulphur, hydrocarbons and types of particles. Photochemical and chain reactions. Mercury, lead, oil detergents, insecticides will be examined from both their general chemistry and their contribution to pollution. *Lectures:* 3 hours per week, second term. (3 credits)

CHEMISTRY 412A
Intermediate Inorganic Chemistry of Transition Metals

Prerequisites: Chem 312A, 314B. Ligand field theories, spectra, magnetochemistry, sigma and pi-bonded complexes, inner transition elements, introduction to organometallic chemistry. *Lectures:* 3 hours per week. *Lab:* 4½ hours per week. (3 credits)

CHEMISTRY 413A
Advanced Inorganic Chemistry

Prerequisites: Chem 412A and 414B. Physical Inorganic Chemistry: IR, NMR, X-Ray, Mossbauer and mass spectral studies of inorganic and organometallic compounds. Group theory and its applications. *Lectures:* 3 hours a week, first term. (3 credits)

CHEMISTRY 414B
Intermediate Inorganic Chemistry of Main Group Elements

Prerequisites: Chem 312A, 314B. Properties, reactions, structure and selected topics in main group chemistry elements. *Lectures:* 3 hours per week. No lab. (3 credits)

CHEMISTRY 415B
Organometallic Chemistry

Prerequisites: Chem 322Z and 412A (can be taken concurrently). Survey of transition and non-transition organometallic compounds including their roles in industrial catalysis and biological systems. *Lectures:* 3 hours per week for second term. (3 credits)

CHEMISTRY 422Z
Organic Chemistry

Prerequisite: Chem 322Z. A confirmation of Chem 322Z, discussing organic reaction mechanisms and synthetic methods at an advanced level. *Lectures:* 3 hours per week for two terms. *Lab:* 3 hours per week, first term. Text: Hendrickson, Cram And Hammond: *Organic Chemistry* (McGraw-Hill 3rd ed), Helmkamp and Johnson: *Organic Chemistry* (Freeman) (6 credits)

CHEMISTRY 423B
Advanced Organic Laboratory

Prerequisites: Chem 322Z, 422Z. Laboratory Individualized problems, syntheses or structure determinations based on the study of research literature, advanced techniques (e.g., catalytic and high-pressure reactions, vacuum techniques) are stressed, as well as the extensive use of spectroscopic methods. *Lab:* 4 hours per week, second term. (3 credits)

CHEMISTRY 425A
Bio-Organic Chemistry I

Prerequisite: Chem 326A and 328B or equivalent. Chemistry of carbohydrates, including stereochemistry, structure determination and reactions. Chemistry of amino acids and proteins, including physico-chemical properties and reactions of amino acids, determination of protein structure, peptide synthesis and conformation of proteins. Introduction to lipid chemistry, steroids. (3 credits) *NOTE A/See § 200.5*

CHEMISTRY 427B
Bio-Organic Chemistry II

Prerequisite: Chem 326A and 328B or equivalent. Introduction to heterocyclic chemistry, chemistry of nucleotides, nucleosides and nucleic acids, chemistry and biological implications of a selection of natural products such as vitamins, alkaloids, antibiotics, etc. (3 credits) *NOTE A/See § 200.5*

CHEMISTRY 432Z
Physical Chemistry Laboratory

Prerequisite: Chem 336A. Some knowledge of Fortran is desirable. The first term: Treatment of Experimental Data. Experimental Error, Graphical and Numerical Methods, Problems using literature data. Spectra analysis. Use of the computer is encouraged. Second Term: Laboratory experiments in Physical Chemistry. *Lectures:* 3 hours per week, first term. *Lab:* 4 hours per week, second term. (6 credits)

CHEMISTRY 433A
Physical Chemistry-Chemical Thermodynamics

Prerequisite: Chem 336A. A second course in thermodynamics. First, Second and Third Laws. Activities. Electrolyte and nonelectrolyte solutions. Lectures: 3 hours per week first term. Text: Lewis and Randall: *Thermodynamics* (McGraw-Hill) (3 credits)

CHEMISTRY 435B
Statistical Mechanics

Prerequisite: Chem 433A. Kinetic theory of gases, Maxwell-Boltzmann Distribution, Transport properties. Theory of Reaction rates, Colloidal State and Surface phenomena. *Lectures:* 3 hours per week, second term. (3 credits)

CHEMISTRY 437A
Atomic and Molecular Spectra

Prerequisite: Chem 336Z. A descriptive course of atomic and molecular spectra and structure. *Lectures:* 3 hours per week, first term. (3 credits)

CHEMISTRY 439A/B
Introductory Physical Chemistry

Prerequisite: Biology students only. *Lectures:* 3 hours per week, first term. Text: Van Holde: *Physical Biochemistry.* (3 credits)

CHEMISTRY 442B
Advanced Analytical Chemistry I

Prerequisite: Chem 342A. A survey of electrochemical methods of analysis, including cell potential theory, potentiometry, electrogravimetry, coulometry, polarography, amperometry, conductometry, chronopotentiometry, and chronoamperometry. The laboratory provides practice in the use of instruments most commonly used in electrochemical methods of analysis. Problems form an integral part of this course. *Lectures:* 3 hours per week, second term. *Lab:* 3 hours per week, second term. Text: Willard, Merritt and Dean: *Instrumental Methods of Analysis* (Van Nostrand, 5th ed). (3 credits)

CHEMISTRY 444A
Advanced Analytical Chemistry II

Prerequisite: Chem 344B. A further study of modern instrumental methods of analysis including Raman spectroscopy, mass spectrometry, electron spin resonance, microwave spectroscopy, X-Ray spectroscopy, radiochemical methods, thermal analysis, chromatographic and other separation techniques, turbidimetry and nephelometry. The interpretation of IR, NMR, UV, and MS data forms an important part of this course. The laboratory is devoted to the identification and quantitative analysis of unknown compounds using classical methods of analysis as well as spectral and chromatographic data. *Lectures:* 3 hours per week, first term. *Lab:* 3 hours per week. *Texts:* Willard, Merritt and Dean: *Instrumental Methods of Analysis* (Van Nostrand, 5th ed), Pasto and Johnson: *Organic Structure Determination* (Prentice-Hall) (3 credits)

CHEMISTRY 445A
Intermediate Physical Chemistry for Biochemists I

Prerequisite: Chem 336Z or 338Z. Selected topics of physical chemistry of particular interest to biochemists. Dipole moments of molecules. Dielectric behaviour. Magnetic properties of molecules. Light scattering. Circular dichroism. Optical rotatory dispersion. Photochemistry. Fluorescence. Phosphorescence. Interfaces. Surface tension. Adsorption. Enzyme — Kinetics. Scintillation counting. Radiation Chemistry. Symmetry. Electrochemistry. *Lectures:* 3 hours per week. (3 credits) *NOTE A/See § 200.5*

CHEMISTRY 447B
Intermediate Physical Chemistry for Biochemists II

Prerequisite: Chem 445A. Selected topics of physical chemistry of particular interest to biochemists. Dipole moments of molecules. Dielectric behaviour. Magnetic properties of molecules. Light scattering. Circular dichroism. Optical rotatory dispersion. Photochemistry. Fluorescence. Phosphorescence. Interfaces. Surface tension. Adsorption. Enzyme — Kinetics. Scintillation counting. Radiation Chemistry. Symmetry. Electrochemistry. *Lectures:* 3 hours per week. (3 credits) *NOTE A/See § 200.5*

CHEMISTRY 452Z
Industrial Chemistry

Prerequisites: Chem 210Z and Chem 322Z or 326/328. Brief outline of the history of the chemical industry. Organization of a chemical plant. Development of industrial processes. Unit operations and equipment. Detailed discussion of industries of greatest importance to Canada, such as petroleum, petrochemicals, plastics, fibres, fertilizers, rubbers, pharmaceuticals, pulp and paper, wood chemicals, heavy inorganic chemicals. Pollution. *Lectures:* 3 hours per week for two terms. *Lab:* no formal labs, but eight to ten one-half day plant tours are an integral part of this course. (6 credits)

CHEMISTRY 491A
Biochemistry I

Prerequisites: For Biochemistry Majors: Chem 322Z, and 336Z or 338Z. Chem 425A must be taken concurrently. For Biology Majors: Chem 326/328. Fundamental aspects of biochemistry are surveyed. Enzymology: classification, mechanisms and kinetics of enzymes. Intermediary metabolism: principles of metabolism — overview of metabolic design strategy and inter-relations; catabolism-carbohydrates (glycolysis, TCA cycle and phosphogluconate pathways), proteins (amino acid degradation and urea cycle), lipids (fatty acid oxidation). Bioenergetics: ATP, respiration and oxidative phosphorylation. Photosynthesis: mechanism and relation to intermediary metabolism and bioenergetics. *Lectures:* 3 hours per week, one term. *Lab:* 3 hours per week, one term. Text: Lehninger: *Biochemistry* (2nd ed) (3 credits) *NOTE A/See § 200.5*

CHEMISTRY 493B
Biochemistry II

Prerequisite: Chem 491A. Continuation of Chem 491A. Intermediary Metabolism: biosynthesis of carbohydrates, amino acids, lipids and nucleotides. Nucleic Acids: biochemical and functional properties of DNA and RNA — viruses, bacteria and man — DNA replication and transcription, RNA translation, genetic

code, protein synthesis, control of gene expression. *Lectures:* 3 hours per week, one term. Text: Lehninger: *Biochemistry* (2nd ed) (3 credits) *NOTE A/See § 200.5*

CHEMISTRY 523A
Chemistry of High Polymers

Prerequisite: Chem 322Z. A detailed study of the mechanisms involved leading to the formation of polymeric species includes condensation, free radical, cationic, anionic and co-ordination mechanisms. Some physical systems and examples of polymers will be discussed and examined. Some general considerations concerning reactivity and reactions of macromolecules. *Lectures:* 3 hours per week, first term. (3 credits)

CHEMISTRY 525B
Chemistry of High Polymers

Definition and description of different polymer molecules, monomer-polymer differences; polymerization mechanisms and kinetics — (M.W. Dist.); conformation and dimensions of random polymer chains; thermodynamics of polymer solutions; analytical methods of polymer Science; thermodynamics of rubber elastic; the crystalline state; mechanical properties of high polymers; structure and function of biopolymers. *Lectures:* 3 hours per week, second term. text: F. Billmeyer, Jr.: *Textbook of Polymer Science* (2nd ed) (3 credits)

CHEMISTRY 531B
Electrochemistry

Prerequisites: Chem 336Z and 433A. Debye-Huckel Theory, electrolytic conduction, transport properties in electrolytes, electrochemical cells. Thermodynamics and kinetics of electrochemical system. Overvoltage. *Lectures:* 3 hours per week, second term. (3 credits)

CHEMISTRY 532Z
Theoretical Chemistry

Introductory matrix algebra and group theory. Quantum mechanics and the special functions. Perturbation methods, atomic structure and spectra. Theories of molecular bonding, molecular structure and spectra. Inter-molecular forces and elements of liquid state and solid state theory. Rate processes, photochemistry and chain reactions. *Lectures:* 3 hours per week, both terms plus monthly individual tutorial. Text: Levin: *Quantum Chemistry.* (6 credits)

CHEMISTRY 534A
Advanced Physical Chemistry Laboratory

Lab: 4 hours per week, first term. (3 credits)

CHEMISTRY 535A
Radiation Chemistry

Prerequisite: Chem 210Z. A study of the chemical effects caused by ionizing and other nuclear radiations in their passage through matter. A description will be given of the quantitative measure of radiation, energy absorbed, the energy absorption mechanism, the reaction paths of the unstable intermediates (excited molecules, radicals, andions). A discussion of the mechanisms reduced for the radiation-induced dissociation of H_2O, organic compounds in the gaseous and liquid state and radiation effects in specific solids. *Lectures:* 3 hours per week for one term. (3 credits)

CHEMISTRY 541A
Nature and Analysis of Pollutants

Prerequisites: Introductory courses in organic and analytical chemistry. The latter prerequisite may be waived in special cases with the permission of the instructor. The course surveys major industrial and municipal air and water pollutants of concern to modern society — their sources, effect and analysis. Included is a description of measuring systems, sampling procedures, concentration and separation techniques, and of methods commonly used to analyze pollutants. Topics such as continuous monitoring systems, automated analysis, data analysis, and pollution control techniques are discussed. *Lectures:* 3 hours per week, first term. *Labs:* no formal labs, but two or three one-half day tours of pollution control installations are a part of this course. (3 credits)

CHEMISTRY 552Z
Senior Thesis

Students in Honours and Specialized programmes, with permission of the department, undertake a research project in any branch of chemistry, directed individually by a faculty member, and submit a written detailed report. (6 credits)

CHEMISTRY 590Z
Advanced Biochemistry

Prerequisite: Chem 491A and 493B. Biosynthesis of carbohydrates, lipids, amino acids and nucleotides. Replication, transcription and translation of genetic information. Regulation of gene expression. Biochemistry of muscle contraction. Membrane structure and function. Neuro-biochemistry *Lectures:* 3 hours per week for two terms. *Lab:* 3 hours per week, second term. Text: Lehninger: *Biochemistry* (2nd ed) (6 credits)

CHEMISTRY 592Z
Medicinal Chemistry

Prerequisites: Chem 491A and 493B. Types of drug action. Influence of physiochemical properties. Drug-receptor interaction, topography of receptors. Theories and molecular mechanisms of drug action. Survey of selected groups of drugs. Drug design. *Lectures:* 3 hours per week for two terms. Text: Korolkovas: *Essentials of Molecular Pharmacology (6 credits)*

CHEMISTRY 594Z
Pharmacology

Prerequisites: Chem 491A and 493B. Bio 440Z. Pharmacokinetics, drug metabolism and interaction. Toxicology, carcinogeneticy and teratogeneticy. Drug development and testing. Autonomic nervous system pharmacology. Functions of central nervous system, depressants, stimulants. Narcotic analgesics, addiction. Cardiovascular, renal and endocrine pharmacology. *Lectures:* 3 hours per week for two terms. (6 credits)

The following course is a university level course which was offered in the year indicated but which did not appear in the official Calendar.

1976-77
CHEMISTRY 427B
Bio-Organic Chemistry
(3 credits)

51.7 Department of Classics

Assistant Professor and Chairman
S. CASEY

Associate Professor
D. BROWN

Assistant Professors
E. PRESTON
L. SANDERS
B. WARDY

51.7.1 DEPARTMENT OF CLASSICS

The Department offers courses in Ancient History, in Latin, Greek and Hebrew language, and in the respective literatures read in the original or in translation. It also offers courses in Pre-History, Archaeology and Anthropology.

The Department offers programmes in two streams. The stream of *Classical Philology* requires linguistic competence in Latin, Greek or Hebrew, and emphasizes aesthetic appreciation of the ancient literature. The stream of *Classical Studies* does not require a knowledge of the languages and is directed toward broader considerations of societal problems arising from the "living past".

Students may register for a programme in either stream. An *Honours* programme consists of 54 credits in Classics and 6 credits in a cognate course which may be chosen in another department. A *Major* programme consists of 42 credits in Classics. A *Minor* programme consists of 24 credits in Classics. In the Philology stream, this will involve 24 credits aimed at the rapid acquisition of a reading competence in two ancient languages. In the Classical Studies stream the courses will normally be chosen from the following: L220, L224, L225, L230, L231, L240, L241, L260, L264, L265.

Students must consult the department chairman to select the courses in their programme.

Some courses are directed exclusively to *Honours* students. In all other Classics courses, *Honours* students will meet with the professor for tutorial sessions in addition to the regular scheduled classes.

Students seeking admission to the Honours programme on or after June 1st 1977 will be bound by the Honours requirements outlined in § 16.2.4 of this Calendar. Students who already had Honours status by June 1st 1977 will continue to be governed by the requirements which applied at the date of their admission to the Honours programme.

51.7.2 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.5.

CLASSICAL STUDIES

A. Literature

CLASSICS L211
The Beginnings of European Literature (Greek Literature)

The Greek background of European literature: The *Iliad* of Homer, selections from the Greek dramatists (the *Oresteia* of Aeschylus, the *Oedipus Rex* and the *Antigone* of Sophocles, the *Bacchae of Euripedes, and at least one comedy of Aristophanes), the Pastoral Poets, Plato's Symposium,* and Aristotle's *Poetics.* (3 credits)

CLASSICS L212
The Beginnings of European Literature (Latin Literature)

The Roman background of European literature: the *Aeneid* and *Eclogues* of Vergil, Ovid's *Metamorphoses,* poems of Catullus, Horace and Juvenal, the *De Rerum Natura* of Lucretius, plays and dialogues of Seneca. (3 credits)

CLASSICS L220
Greek Drama: Theatre and Democracy in Fifth Century Athens

Essentially a study of the literary and artistic merits of the tragedies of Aeschylus, Sophocles and Euripides, and the comedies of Aristophanes. The ritual origins of drama, mythical sources, and the growth of the dramatic form. Greek theatre as an expression of the democratic movement and of the intellectual revolution in fifth century Athens. (6 credits)

CLASSICS L222
The Comic Art

An investigation into the evolution of comedy from our earliest literary sources to the present. The classical influence in later comic literature. Theories of comedy, ancient and modern. Reading material will be drawn mainly from Greek and Roman dramatic literature. (3 credits)

CLASSICS L224
Homer and the Epic Hero I

This course will deal principally with the *Iliad*

of Homer: its form, content and meaning as an oral epic. Also investigated will be the hero in a warrior society: his privileges, responsibilities and moral values. (3 credits)

CLASSICS L225
Homer and the Epic Hero II

This course will deal mainly with the *Odyssey* of Homer and the *Aeneid* of Vergil. A comparison will also be made between the concept of the hero in ancient and in modern literature. (3 credits)

B. History

CLASSICS L230
(Also given as History L219)
The Ancient Near East I

A short introduction on the Neolithic Period will be followed by the history of Egypt, with emphasis on economic, political and religious factors. (3 credits)

CLASSICS L231
(Also given as History L221)
The Ancient Near East — Part II

The purpose of this course is to give a survey of the history of Mesopotamia, Syria, Ancient Israel and the Hittites. Ancient sources will be used whenever possible. (3 credits)

CLASSICS L240
(Also given as History L223)
Greek History

A survey of Greek history from Minoan-Mycenaean time to the Roman conquest of Greece, viewed primarily through the eyes of contemporaries, emphasizing those issues that have excited and continue to arouse interest and controversy among historians. Though Athens for its unique cultural and political achievement inevitably occupies the central interest, due attention will be paid her critics as well as admirers. The credibility of the ancient evidence will be carefully assessed and emphasis will be placed on social and economic as well as political matters. (3 credits)

CLASSICS L241
(Also given as History L225)
Roman History

A survey of Roman history from 776 B.C. to 476 A.D. viewed primarily through the eyes of contemporaries, emphasizing those issues that have excited and continue to arouse interest among historians. The central interest will inevitably be Rome's administrative genius and imperial successes. Social and economic as well as political data will be considered and the credibility of the ancient evidence will be carefully assessed. (3 credits)

CLASSICS L344
Propaganda and Political Deception in Greek and Roman History

An examination of the relationship between political ideas and practice with particular emphasis upon the slogans and false ideologies invented to justify war, peace, and the implementation of political and constitutional programmes by both radical and reactionary elements. Though inevitably the chief sources discussed will be literary, due attention will also be directed towards the value of numismatic, epigraphic, and artistic material as a means of winning over the mind of man. (6 credits)

CLASSICS L346
(Also given as History L324)
Continuity and Change: An Intellectual History of the Late Roman Empire

A study of the main intellectual and social forces in the late Roman Empire that contributed most significantly to the formation of European culture. Among those topics treated will be: Neo-Platonism, Gnosticism, the Greek and Roman system of education, government and private welfare policies, mystery religions, late Judaism, early Christianity, the religious policy of pagan and Christian Emperors, contemporary art and architecture. (6 credits)

CLASSICS L448
(Also given as History L420)
Julius Caesar and Alexander the Great

Prerequisite: Ancient History course. May be taken either as a History or Classics course. Three centuries separate them, perhaps history's greatest field marshals, reformers, and visionaries, two men more than all others loved, despised, admired, and condemned by contemporaries and posterity alike. This course will seek to discover them as they were, the worlds they conquered, and what Alexander and Caesar wanted and planned their worlds to be. (6 credits)

CLASSICS L449
(Also given as History L422)
Human Beginnings: The Stone Ages

May be taken either as a History or a Classics course. The origin of man and man's place in evolution and in nature, Man the toolmaker: australopithecines, homo habilis, homo erectus, Peking man, Java man, Solo man, and others. The fossil evidence and taxonomic problems. Man the hunter: meat-eating, intelligence, and sexual differentiations. Territoriality and aggression. The struggle for existence and the survival of the fittest: Darwinism, Marxism, and sociology.

Palaeolithic cultures: Abbevillean, Acheulean, Clactonian, and Mousterian. Neanderthal and Cro-Magnon mixtures? Man the artist. From Perigordian to Magdalenian. Epipalaeolithic and Mesolithic societies. The Neolithic revolution. Stone Age cultures of today. Importance and relevance of prehistory. Homo ludens. (6 credits)

C. Culture and Civilization

CLASSICS L250
Greeks and the Afterlife

A study of ideas of immortality as reflected in classical Greek literature. An examination of myths, mystery religions and schools of philosophical thought. This literary survey will include readings translated from the works of Homer, Hesiod, Sophocles, Euripides and Plato. (3 credits)

CLASSICS L251
Romans and the Afterlife

A study of the growth of early Roman customs connected with the supernatural. Burial practices and tomb paintings of the Etruscans. Popular Roman concepts of the underworld and the influence of Greek myth. The intellectual influence of Greek philosophy on later Roman religious thought as reflected in the works of Cicero and Lucretius. Religion and the patriotic ideal in the Augustan revival as reflected in Vergil's *Aeneid*. (3 credits)

CLASSICS L252
Love, Hate and Friendship in the Classical World I

The growth and failure of human relationships were of intimate concern to men and women in the ancient world, as they are today. This course will investigate in the literature of classical times the evolving shape of human encounter in terms of three basic emotions: love, hate and friendship. The theme "love" will be examined as expressed in the *Odyssey* of Homer and especially in the love poetry of Greece and Rome. (3 credits)

CLASSICS L253
Love, Hate and Friendship in the Classical World II

The theme "hate and revenge" will be seen in its most tragic form in the *Iliad* of Homer and in the plays of the Greek dramatists. The third theme, "friendship", will be examined in its elemental form in the *Iliad* of Homer, and then in its urbane expression in the works of Plato and Cicero. (3 credits)

CLASSICS L254
Women in Classical Antiquity

An examination of the social status and political influence of women in ancient Greece and Rome. Particular emphasis will be placed upon the apparent contradiction between the seemingly inferior position occupied by women in fifth century Athens and the general enlightenment that characterized the epoch. Within this context the influence of war upon the struggle for feminine emancipation, as seen through the eyes of tragedians, comic writers, philosophers and historians, will be considered. Roman women will be viewed with particular reference to the question: to what extent the essentially hostile scandalmongering of the sources is reflective of veracity of fact of an essentially non-liberal environment. (6 credits)

CLASSICS L256
A Comparative Study of Judaic and Greek Traditions

The course deals with the problems involved in the encounter of the Judaic and Greek traditions and is designed also for students of Philosophy, Theology, and History.

The end of the first diaspora. Different currents (exclusiveness versus rapprochement) under Persian rule. Alexander legends. Maccabaean Hellenism. Anti-semitism in Alexandria. The mutual influence between Judaism and Hellenism as manifest in philosophical and religious writings, in symbols and customs. Their importance for the development of Western culture. The destruction of political Judaic independence and gradual intellectualization of Jewish life. The development of the synagogue and the Tanaitic Academies. (6 credits)

CLASSICS L260
Myth and Mythmaking

An examination of the universal features of myth. Recurrent patterns of myth in primitive cultures (Asio-Indian, American-Indian, Insular Pacific, Celtic, etc.). Near Eastern Mythologies (Mesopotamia, Ugarit). Mythological remains in the Old Testament and post-biblical Jewish literature. Major classical myths, the origin of the gods, the feats of heroes, and the adventures of mortals in Homer, Hesiod, the Greek Tragedians, the Platonic Dialogues, Ovid, and the Bible. (6 credits)

CLASSICS L262
Chinese Myths

Their sources, development, and analysis. The folktales and myths will be used as a means of understanding the ideas and sentiments of the ancient Chinese. Those myths were selected which are most representative of Chinese mythology, still live in the minds of the people, and are referred to most frequently in their literature. (3 credits)

NOTE: This course may be taken by students engaged in the Third World Studies Programme.

CLASSICS L264
(Also given as History L227
An Introduction to Archaeology

Archaeology as a science; its purpose, methods, theories, and techniques. The relationship of Archaeology to Pre-History, Ancient History, Fine Arts, and Anthropology. The Neolithic Revolution and the emergence of the earliest civilizations: Mesopotamia, Egypt, India, and China. The Bronze Age in Crete and in Greece. Most of the course will consist in the presentation, classification, dating, and interpretation of selected artifacts. Some work at the Montreal Museum of Fine Arts. (3 credits)

CLASSICS L265
(Also given as History L229)
Greek and Roman Art and Archaeology

The archaeology of Greece and Rome with particular attention to painting (especially ceramics), sculpture, and architecture. The concept of "style" in archaeology and in art history and criticism. The works of Exekias and Douris, of Phidias and Praxiteles, and of Iktinos and Kratinos as representative of the "ideal" in Classical Greek Art. Roman Art as Greek and Etruscan derivative as well as evidencing the peculiarly Roman. The falsifications of history and the truth that can be recovered by the archaeologist. Some work at the Montreal Museum of Fine Arts. (3 credits)

CLASSICS L266
Civilization, Barbarism and Savagery

The purpose of this course will be to formulate and develop, if possible, useful definitions of civilization, barbarism and savagery, with a view toward answering the question as to whether or not man has "progressed". Students will be expected to research and then orally to report upon as wide a variety of human cultures as will be possible and practicable, from the most "primitive" to the most "advanced".

The meanings and uses of cannibalism, human sacrifice, torture, and self-mutilation. Hunting, fishing and food gathering societies (Old Stone Age) contrasted with early food producing ones (New Stone Age). The first cities (Bronze Age); their mores and ethics. The great "advances": fire, language, religion, animal domestication, pottery, metallurgy, writing. (3 credits)

CLASSICS L268
Mesoamerican Archaeology

An archaeological and anthropological study of the Pre-Columbian peoples, cultures, and civilizations of ancient Mexico, Belize, Guatemala, and Honduras: the Olmec "mother culture" Izape, Monte Albán, Tlatilco, and Teotihuacán. The glory and the grandeur of the Maya. Form and iconography in Mesoamerican art. From the Toltecs to the Aztecs. An aesthetic appreciation of Pre-Columbian art and archi-

tecture. What does it all mean? Current excavations, theories, and controversies among Americanists. Some work at the Montreal Museum of Fine Arts. (3 credits)

CLASSICS L269
South American Archaeology
An archaeological and anthropological study of the Pre-Columbian peoples, cultures, and civilizations of ancient Peru, Columbia, Ecuador, Bolivia, and Chile: the "mother culture" of Chavin de Huántar. Valdivian pottery and stone age (Jomon) Japan. The great empires of Peru before the Incas: Huari-Tiahuanaco, Chan Chan, and Chimu. Paracas, Nazca, and Mochica art. The "tears of the sun" and the coming of the Incas. Characteristics of Inca civilization. A survey of current excavations and research. Some work at the Montreal Museum of Fine Arts. (3 credits)

CLASSICAL PHILOLOGY
A. Greek

CLASSICS L280
Elementary Greek
A course for those with no previous knowledge of Greek. Major emphasis will be placed on assisting the student in acquiring a reading command of the language. This course is designed not only for those interested in classical literature but also for students in the departments of Philosophy and Theology. (6 credits)

CLASSICS L380
Intermediate Greek
Prerequisite: Classics L280 or equivalent. Further work toward the acquisition of a reading command of the language. Plato's *Apology* and *Crito*. (6 credits)

CLASSICS L480
Greek Literature (Advanced)
Prerequisite: Classics L380. Demosthenes' *Philippics* and Euripides' *Alcestis*. (6 credits)

CLASSICS L482
Plato: The Republic
Prerequisite: Classics L380. (6 credits)

CLASSICS L484
Herodotus and the Lyric Poets
Prerequisite: Classics L380. (6 credits)

CLASSICS L486
Homer
Prerequisite: Classics L380. Extensive readings from the two epics in Greek; both works in their entirety in English. (6 credits)

CLASSICS L488
Greek Tragedy
Prerequisite: Classics L380. Aeschylus' *Agamemnon*, Sophocles' *Oedipus Rex*, Euripides' *Hippolytus*. (6 credits)

B. Latin

CLASSICS L290
Elementary Latin
A course for those with little or no experience with Latin. Major emphasis will be placed on assisting the student in acquiring a reading command of the language. Open to all students but especially those interested in classical languages, history, philosophy, and theology. (6 credits)

CLASSICS L390
Intermediate Latin
Prerequisite: Classics L290 or equivalent. Cicero's *Pro Archia*, selections from Catullus and the *Odes* of Horace. (6 credits)

CLASSICS L392
Late Latin
A study of selected texts from the works of patristic and medieval writers. This course is directed especially to students of history, philosophy, and theology with at least a knowledge of elementary Latin. (6 credits)

CLASSICS L490
Latin Literature (Advanced)
Prerequisite: Classics L390. Cicero's *Pro Lege Manilia* and the second, fourth, and sixth books of the *Aeneid*. (6 credits)

CLASSICS L491
Cicero
Prerequisite: Classics L390. Careful examination of selections from the oratorical and philosophical works. (6 credits)

CLASSICS L492
Lucretius
Prerequisite: Classics L390. A study of the philosophy and poetry of the *De rerum natura* of Lucretius. Readings in the original and in translation. (6 credits)

CLASSICS L494
Livy and Tacitus
Prerequisite: Classics L390. Extensive readings from Livy, Books 21-30, and the *Annales* of Tacitus, with particular attention to the Latinity peculiar to each historian. (6 credits)

CLASSICS L496
Roman Comedy
Prerequisite: Classics L390. (6 credits)

CLASSICS L498
Roman Satire
Prerequisite: Classics L390. (6 credits)

C. Hebrew

CLASSICS L270
Elementary Hebrew
An introductory course in reading, writing, and grammar for students with little or no knowledge of Hebrew. This course is designed not only for those interested in conversational Hebrew, but also for students in the department of Theological Studies who will be assisted in acquiring first a reading command of the language. (6 credits)

CLASSICS L272
An Introduction to Biblical Hebrew
Prerequisite: Classics L270. A study of classical Hebrew grammar. Accurate reading of selected prose passages of the Hebrew Bible. (Poetic selections may also be studied if the students so desire.) (6 credits)

CLASSICS L370
Intermediate Hebrew
Practice in grammar and conversation. Readings from modern Hebrew authors. (6 credits)

CLASSICS L470
Introduction to Modern Hebrew Literature
Prerequisite: A working knowledge of Hebrew is essential. A selection of Hebrew prose and poetry will be studied, ranging from Biblical to contemporary Israeli literature. The selections will be analysed from both the literary and linguistic point of view. Review drills in grammar and syntax will be assigned. (6 credits)

51.8 Department of Communication Studies

Associate Professor and Chairman
J. TIERNEY

Professors
J. BUELL
M. MALIK
J. E. O'BRIEN, S.J.

Associate Professors
C. FISCHER, S.J.
M. GERVAIS, S.J.

Assistant Professors
D. CLARK
D. DINIACOPOULOS
T. GECSEI
W. GILSDORF
J. HARRISON
D. MURPHY
G. VALASKAKIS

51.8.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1.

The superscript indicates credit value.

90 BA Specialization in Communication Studies

Year I
18 COMS L205[3], L255[3], L275[3], L278[3], L281[3], L287[3]
12 Elective credits*

Year II
6 COMS 300 level courses in "Liberal Arts and Humanities cluster"
6 COMS 300 level courses in "Social Science/Research cluster"
6 COMS in "Visual Arts cluster"
12 Elective credits*

Year III
6 COMS 400 level courses in "Liberal Arts and Humanities cluster"
6 COMS 400 level courses in "Social Science/Research cluster"
6 COMS in "Professional cluster" (Visual Arts — Yr III) If not accepted into one of these advanced courses, the student may, with the written approval of the Chairman, register for 6 credits in Communication Studies and fulfill the requirements for the degree.
6 COMS in "Liberal Arts and Humanities cluster" or in "Social Science/Research cluster"
6 Elective credits*

**NOTE: Electives are understood as courses taken in other Departments or Faculties of the University. Credits in Communication Studies (Loyola Campus) or Cinema (Sir George Williams Campus) may not be used in lieu of electives.*

90 BA Major in Communication Studies

Year I
18 COMS L205[3], L255[3], L275[3], L278[3], L281[3], L287[3]
12 Elective credits*

Year II
6 COMS 300 level courses in "Liberal Arts and Humanities cluster"
6 COMS 300 level courses in "Social Science/Research cluster"
6 COMS in "Visual Arts cluster"
12 Elective credits*

Year III
6 COMS 400 level courses excluding those in "Professional cluster" (Visual Arts — Yr III)
24 Elective credits*

**NOTE: Electives are understood as courses taken in other Departments or Faculties of the University. Credits in Communication Studies (Loyola Campus) or Cinema (Sir George Williams Campus) may not be used in lieu of electives.*

51.8.2 DEPARTMENT OF COMMUNICATION STUDIES

The Department offers two programmes of study:

a) *Bachelor of Arts, Specialization in Communication Studies*
consisting of a minimum of 60 credits in Communication Studies and 30 credits from electives outside the Department.

b) *Bachelor of Arts, Major in Communication Studies*
consisting of a minimum of 42 credits in Communication Studies and 48 credits from electives outside the Department.
Students who have been accepted into the Department take the following 18 credits in University I: COMS L205[3], L255[3], L275[3], L278[3], L281[3], L287[3]
Students "Specializing" in Communication Studies choose the remaining 42

credits as follows:
12 credits from courses in Cluster LA/H
12 credits from courses in Cluster SS/R
12 credits from courses in Cluster VA*
and the remaining 6 credits from courses in Cluster LA/H or SS/R, or with the approval of the Department in cognate courses outside the Department.
Students "Majoring" in Communication Studies choose the remaining 24 credits as follows:
6 credits from courses in Cluster LA/H
6 credits from courses in Cluster SS/R
6 credits from courses in Cluster VA* and the remaining 6 credits from courses in Cluster LA/H or SS/R.
**Visual Arts in University III is designated "Professional Cluster".*

Department Objectives

The Department of Communication Studies, founded in 1965 as Communication Arts, the first at a Canadian university, has developed a programme that combines the study of the major media with the Humanities and Sciences needed for their understanding and optimal use.

The program is designed to provide students with a high level of media literacy and with a grasp of the scientific, technological, social, and historical contexts of modern media and communication. It is multi-disciplinary both within its own curriculum and in its recommended electives in the humanities, sciences, and social sciences which are integral to the programme.

Intellectually and critically, both in seminar rooms and laboratories, the primary concern is to investigate "media man" and "media world", to understand more fully the role of media in society, to examine critically the goals of society as projected in media, and to assess realistically the responsibilities of media vis-à-vis that society. To this end, students are encouraged to develop a personal artistic and ethical statement on the quality of life and the goals of society.

Integrated with this, the student's creative work starts with acquiring skills in the basic technology of the media, and understanding these media as communicational modes. This is followed and enlarged by a concentration on the rhetorical and artistic dynamics of media (be it film, television, radio-sound, photo, etc.) and on the content of a work created in a particular medium.

The curriculum is designed:
1. for students who intend to continue graduate studies in communication;
2. for future writers, critics, communication studies consultants, directors, and performers;
3. for future teachers in all aspects of radio, television, film, photography (research, theory or practical);
4. for students who plan a career in the areas of publicity, promotion, advertising and public relations.

Facilities

The department has one professionally-equipped television-film studio, 7-source video input, 2'' — 1'' — ½'' videotape recording and editing facilities, 14 portable TV cameras, 7x 16 mm professional units, 16mm sync and editing units, and complete super 8mm sync sound/film units; photographic laboratories, an optical laboratory, an holographic and laser laboratory, multiple sound facilities, a research studio for the measurement of visual and audio information loads, an electronic and electro-mechanical programmer for multi-media use, a multi-media room, and a learning centre with audio-film-video terminals for independent study.

Department Admission Requirements

Bachelor of Arts degree: The normal requirement for students residing in Quebec is the completion of the CEGEP programme (D.E.C.); for students residing outside Quebec, the equivalent is the completion of 13 years of schooling.

The maximum number of students the department can accept is determined by faculty and facilities, in order to provide optimum education for an optimum number. Applications repeatedly outnumber the space and faculty.

To allow us to make a fair and informed selection we ask the applicants to provide us with adequate information about themselves, their work, and their aims. For this purpose, applicants are requested to submit:
1) a comprehensive letter of intention stating clearly and effectively why the applicant wishes to enroll in the Department of Communication Studies in particular. (This letter is critical.)
2) meaningful letters of recommendation, at least two of which should be from teachers who are acquainted with the applicant's talents and ability.
3) a complete record of all studies to the present time, including those courses in which the applicant is now enrolled.
4) one or two examples of creative effort or thought in any medium of expression, one example of critical thought. (Items 1 and 4 should show evidence of intelligent use of language, and evidence of a working knowledge of English if the candidate is not English-speaking.)
5) an interview which will include discussion of any or all of the above, plus any topics that the committee feels will provide insight into the candidate's potential for university level study of media.

Applications and all supporting documents should be sent to the Admissions Committee, Department of Communication Studies, Loyola Campus of Concordia University, 7141 Sherbrooke St. W., Montreal H4B 1R6, Quebec.

Diploma in Communication Studies

The Department also offers a one-year diploma programme for students who have completed their undergraduate degree in another field. Detailed information on the programme is given in the University's Calendar of Graduate Studies.

51.8.3 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.5.

COMMUNICATION STUDIES L205
History of Communication Media Carriers

Prerequisite: Comm. Studies Major. Selected segments from the history of painting, design, architecture, drama, photography, film, radio and television related to the possible use in media productions and to the contemporary philosophy of communication. Readings and viewing of major styles, artworks, and authors in a self-instructional, programmed course. (3 credits)

COMMUNICATION STUDIES L255
Communication Analysis

Prerequisite: Comm. Studies Major. General and detailed analysis of various information complexes, e.g., museums, galleries, exhibitions, countrysides, landscapes, city streets, highways, department stores, churches, etc., from the point of information values used to influence future prospective audiences of films, television programmes or exhibition and theatre visitors. The basic values of light, space, sound, picture, words and exhibit structures will be explored through individual student projects in real locations. Students will work on individual projects under the supervision of the directing professor. Tutorial course. (3 credits)

COMMUNICATION STUDIES L275
Dynamics of Visual Representation I

Prerequisite: Comm. Studies Major or approval of the Department. In this course students are led to discover fundamental laws which underlie visual representation. The overall method is basic experiments in vision and perception: to explore distances, planes, tones, light, etc. Photography is the medium by which these experiments are recorded for observation and discussion. (3 credits)

COMMUNICATION STUDIES L278
Seminar and Practicum in Graphics and Sound I

Prerequisite: Comm. Studies Major. The Graphics section is designed to provide the students with an understanding of graphics as a communication language through the study of design, color, spatial organization and content symbolization theories applied to graphic techniques, as well as mass communication and perception theories. Conceptualization of ideas is stressed. The Sound section of this course is designed to provide the student with a basic working knowledge of audio systems both natural and electronic, to understand the various affective and psychological qualities of sound, and how sound may be structured into imaginative aural forms, which may also be applied to visual media. A final slide/tape presentation is required from each student to evaluate his/her comprehension of differing media characteristics. (3 credits)

COMMUNICATION STUDIES L281
Seminar and Practicum in Film I

Prerequisite: Comm. Studies Major. An introduction to the language of film, with productions designed to implement the theoretical emphasis of the material covered. The course includes scripting, directing, shooting and editing. (3 credits)

COMMUNICATION STUDIES L287
Seminar and Practicum in Television I

Prerequisite: Comm. Studies Major. This is a course in video covering early uses, present applications and future possibilities. The course methodology includes lectures, screenings, use of research material and testing of applications of video theories. (3 credits)

LIBERAL ARTS AND HUMANITIES CLUSTER

COMMUNICATION STUDIES L300
Selected Topics in Communication Studies

Prerequisite: Comm. Studies Major or Specialization. Content will depend on the theme designated by the Department, which varies from year to year. (3 credits)

COMMUNICATION STUDIES L301
Selected Topics in Communication Studies

Prerequisite: Comm. Studies Major or Specialization. A student may repeat Comm. Studies L300, provided that the content is different, by registering for credits under Comm. Studies L301. (3 credits)

COMMUNICATION STUDIES L302
Selected Topics in Communication Studies

Prerequisite: Comm. Studies Major or Specialization. Content will depend on the theme designated by the Department, which varies from year to year. (3 credits)

COMMUNICATION STUDIES L303
Selected Topics in Communication Studies

Prerequisite: Comm. Studies Major or Specialization. A student may repeat Comm. Studies L302, provided that the content is different, by registering for credits under Comm. Studies L303.

COMMUNICATION STUDIES L304
Media and Media-Culture

Prerequisite: Comm. Studies Univ. II and III. This course is about media and their function, overt and covert; their effect on perception: as bases for thought, organization, technologies: as determinants of content: as accelerators of cultural changes; oral-aural, manuscript, print, electronic cultures, current cultural dynamics. The method is lecture-discussion and projects. Assignments are more or less monthly. (6 credits)

COMMUNICATION STUDIES L305
Advanced Script-Writing for Film

Prerequisite: Submission of an original short story by August 1st, and subsequent approval of instructor. A practical course in writing film-drama: story construction and plotting, scene-making, characterization and character development, dialogue, dramatic continuity, timing, pacing, rhythm, suspense, and creative criticality. Many of these fictional and dramatic techniques will, as the occasion arises, be applied to non-fictional scripts as well. The method is lecture, discussion, demonstration, critique. Assignments are continual and on-going. (6 credits)

COMMUNICATION STUDIES L306
Documentary Film

Prerequisite: Open to all Univ. II and III students. A survey of the documentary film field from 1895 until today, with an examination of major styles (Romantic, Realistic, Expressionistic, Avant-Garde, etc.) in the works of significant documentary filmmakers. The method is lecture, screenings, critique and discussion. (3 credits)

COMMUNICATION STUDIES L307
Hollywood in the Silent Era

Prerequisite: Open to all Univ. II and III students. In depth study of the 60-year career of Chaplin, with special emphasis on the great early comics (Keaton, etc.); Hollywood and the birth of the movies: D. W. Griffith, von Stroheim. (Offered 1979-80) (3 credits)

COMMUNICATION STUDIES L308
The German Expressionist Movement

Prerequisite: Open to all Univ. II and III students. Lang, Murnau, Pabst, etc., in Germany and in their later Hollywood careers. The German cinema of the '20's; the Expressionists. Integration with the socio-cultural climate of the pre-Hitler days. (Offered 1977-78) (3 credits)

COMMUNICATION STUDIES L309
The Revolutionary Soviet Cinema

Prerequisite: Open to all Univ. II and III students. The Soviet Formalists of the '20's: Eisenstein, Pudovkin, Dovzenko. Film and revolution; Marxist aesthetics. The later evolution of the Soviet cinema. (Offered 1978-79) (3 credits)

COMMUNICATION STUDIES L310
The Hollywood Genres

Prerequisite: Open to all Univ. II and III students. Concentration on specific genres and directors of Hollywood in its golden era ('30's, '40's). The aesthetics of art and the mass audience. (Offered 1977-78) (3 credits)

COMMUNICATION STUDIES L311
The Classic French Cinema

Prerequisite: Open to all Univ. II and III students. Before the Nouvelle Vague, the great French cinema of Renoir, Clair, Ophuls, Cocteau. (Offered in 1978-79) (3 credits)

COMMUNICATION STUDIES L312
La Nouvelle Vague

Prerequisite: Open to all Univ. II and III students. Truffaut, Godard, Chabrol, Resnais, etc. from their New Wave days to the present. Bresson. The new cinema: consciousness, ideology, art. (Offered in 1978-79) (3 credits)

COMMUNICATION STUDIES L313
Ingmar Bergman and the Scandinavians

Prerequisite: Open to all Univ. II and III students. Indepth study of Bergman. The entire context, from the great silent period (Sjostrom, Stiller, etc.) to today (Widerberg, etc.). (Offered 1979-80) (3 credits)

COMMUNICATION STUDIES L314
The Italians, from Neo-Realism to Today

Prerequisite: Open to all Univ. II and III students. The neo-realist movement; Rossellini, De Sica, Visconti, Fellini, Antonioni, Pasolini, Bertolucci, Wertmuller. (Offered in 1977-78) (3 credits)

COMMUNICATION STUDIES L315
Shakespeare in the Cinema

Prerequisite: Open to all Univ. II and III students. *Hamlet, Macbeth, Othello,* etc., as seen in the works of Welles, Olivier, the Russians. A study of the plays and their cinematic expressions: Shakespeare's world via cinema. (Offered in 1977-78) (3 credits)

COMMUNICATION STUDIES L316
The Canadian Cinema

Prerequisite: Open to all Univ. II and III students. The aesthetic, economic, socio-politico-cultural dimensions of feature films in Canada. Course conducted in collaboration with Canadian film directors, producers, actors, critics. (Offered in 1978-79) (3 credits)

COMMUNICATION STUDIES L330
Advanced Script-Writing for Television

Prerequisite: Submission of an original short story by August 1st, and subsequent approval of instructor. The course provides fundamental knowledge of visual scripting, research and evaluation technique. Practical experience is given in writing, narration, dialogue, speech styles, characterization and plot development, scripting for drama, comedy, documentary, children's, variety, TV series, and women's shows. (6 credits)

COMMUNICATION STUDIES L331
Documentary Television

Prerequisite: Open to all Univ. II and III students. A survey of the documentary television field from its beginning until today with an examination of characteristic styles and forms (informative, biographical, current events, compilative, etc.). The method is lecture, video example, critique and discussions. (3 credits)

COMMUNICATION STUDIES L417
Film Ideas

Prerequisite: Comm. Studies Univ. III and approval of instructor. Seminar using film criticism to focus on aesthetic, cultural dimension of present trend-setting films and to explore students' sensibility in context of contemporary culture. Methodology includes viewings, discussions, written critiques, critical/aesthetic readings. (3 credits)

COMMUNICATION STUDIES L435
Documentary Film and Television Genres

Prerequisite: Comm. Studies L306, L331, or approval of instructor. Survey of genres in documentary film and television as: biographical, industrial travelogue, nature, scientific, training, educational, children's films and TV programmes. Examples from Canada, USA, Europe. (3 credits)

COMMUNICATION STUDIES L436
Television and the Arts

Prerequisite: Comm. Studies Univ. III and approval of instructor. An examination in depth of content, styles, and forms in the feature television program with emphasis on the arts — ballet, drama, music, opera, and the dramatized documentary. The course includes a study of successful adaptation of works of art for the television medium. Examples to be screened will be drawn from programs in Canada, the USA, Europe, and Asia. (6 credits)

COMMUNICATION STUDIES L437
Seminar in Media Forecast

Prerequisite: Comm. Studies Univ. III students. This course examines trends in film, sound, television and other media for future applications. The course includes theory of media effects. Representatives from industry and government are invited to discuss future trends in media utilization. The course demands a theoretical and practical model for original or novel use of a medium or media mix. (3 credits)

COMMUNICATION STUDIES L440
Advanced Topics in Communication Studies

Prerequisite: Comm. Studies Major or Specialization. This course focuses on advanced topics of interest in Communication Studies. Content will depend on the theme designated by the Department, which varies from year to year. (3 credits)

COMMUNICATION STUDIES L441
Advanced Topics in Communication Studies

Prerequisite: Comm. Studies Major or Specialization. A student may repeat Comm. Studies L440, provided that the content is different, by registering for credits under Comm. Studies L441. (3 credits)

COMMUNICATION STUDIES L442
Advanced Topics in Communication Studies

Prerequisite: Comm. Studies Major or Specialization. This course focuses on advanced topics of interest in Communication Studies. Content will depend on the theme designated by the Department, which varies from year to year. (3 credits)

COMMUNICATION STUDIES L443
Advanced Topics in Communication Studies

Prerequisite: Comm. Studies Major or Specialization. A student may repeat Comm. Studies L442, provided that the content is different, by registering for credits under Comm. Studies L443. (3 credits)

SOCIAL SCIENCE/RESEARCH CLUSTER

COMMUNICATION STUDIES L350
Communication Research

Prerequisite: Comm. Studies L255 and approval of instructor. An examination of the aids for information impact measurements, demonstrated on communication media carriers. Testing will be conducted on information complexes previously analyzed, e.g., photographs, advertisements, film segments, television program sequences, exhibitions, urban environments and open country landscapes. The main emphasis of learning is on the methodology of tests, diagnosis and interpretations of results for practical media productions. A biometrical and biotelemetrical approach is used for testing. Each student will work on individual projects during the year. Tutorial course. (3 credits)

COMMUNICATION STUDIES L360
Mass Communication

Prerequisite: Comm. Studies Univ. II and III. The course will examine the nature and forms of Mass Communication, the social sources and uses of Mass Communication, its psychology, audiences and effects. The ethics of Mass Communication will also be discussed. Through guest lecturers from the various media and readings of contemporary analysis/critiques, issues such as media ownership and access, government and self-regulation, technological implications, media accountability, etc., will be raised. (3 credits)

COMMUNICATION STUDIES L361
Seminar in Propaganda

Prerequisite: Open to all Univ. II and III students. The aim of this course is to recognize the orchestration of the elements of propaganda in media and to develop the means to deal with it. Course methodology includes lecture, discussion, and projects. (3 credits)

COMMUNICATION STUDIES L362
Psychology of Communication

Prerequisite: Comm. Studies Univ. II and approval of instructor. The objectives of the course are to provide the learner with: 1) an overview of psychological processes active in the communicative act; 2) the opportunity to explore a single media area in depth, either independently or in a small group. Through a variety of formats, topic areas such as the following are explored: perception and information processing, language development, areas of para-psychology related to communication, influences on attitude/behaviour, verbal/non-verbal codes, meaning, etc. (3 credits)

COMMUNICATION STUDIES L363
Inter-Cultural Communication

Prerequisite: Comm. Studies Univ. II and III. The course examines the relationship between value orientations, culturally-determined behaviour, and the communication process. Theory, research and projects focus on factors influencing inter-personal and mediated communication across subcultural and cultural boundaries. (6 credits)

COMMUNICATION STUDIES L451
Communication Programming

Prerequisites: Comm. Studies L255, L350 and approval of instructor. An advanced tutorial course for students interested primarily in Communication Theory and Research. Individual projects will be assigned on the design of media programmes, the realization of pilot programmes and the evaluation and measurement of effectiveness of receivers' reponses to these programmes. Limited productions and exercises will be conducted on the pilot programme sequences, consisting of 3D complexes, cinema, photography, holography, painted pictures, metacomplexes and internal information spaces. Multi-media and mixed-media programming techniques and approaches will be examined. (3 credits)

COMMUNICATION STUDIES L452
Computer Communication Programming

Prerequisite: Comp Sc 301, Math 216A/B or 217A/B. Digital computer applications to media — film, radio, television complexes. Artificial processing and image enhancement, sound processing. Artificial intelligence and digital logic applied to media and mixed-media projects. Students work on samples of digital programmes, applicable for electronic generation of sound, video and graphics. (3 credits)

COMMUNICATION STUDIES L465
Organizational and Political Communication

Prerequisite: Open to all Univ. III students. After initial defining and relating of organizational and political communication, basic principles and media forms of each are isolated. Then consideration of the learning objectives of seminar participants will lead to the further exploration of such topics as: formal/informal patterns of communication, components of communication networks, internal/external communication of organizations, interrelations between media and politics, role of media in creating national unity, organized campaigning, etc. Activities include: readings and discussion; field study and analysis; research and presentation, guest lecturers. (6 credits)

COMMUNICATION STUDIES L466
Media and Development

Prerequisite: Open to all Univ. III students, with approval of instructor. The course considers the relationship between media, social and cultural change and economic development. Theory, research and projects focus on media's possible effect on and usefulness to underdeveloped areas. (6 credits)

COMMUNICATION STUDIES L467
Broadcasting Policy in Canada

Prerequisite: Open to all Univ. III students. This course acquaints the student with the historical development of broadcasting and broadcasting legislation in Canada. It also examines the nature of the two major broadcasting influences on the Canadian national system: Great Britain and the United States. It covers the present state of broadcasting policy in Canada, its goals and problems, and explores alternative solutions. (6 credits)

COMMUNICATION STUDIES L468
Advertising and Public Relations

Prerequisite: Open to all Univ. III students. Advertising and Public Relations are examined from a mass media focus. Promotions and promotional campaigns are analyzed and critiqued for such things as: structure, effects, audience, media choice and communication strategies. Activities include: lecture/discussions with professionals, creative workshops, in depth critiquing of actual campaigns, design and execution of an actual campaign, seminars on the effects of advertising and public relations on our society. (6 credits)

VISUAL ARTS — PROFESSIONAL CLUSTER

COMMUNICATION STUDIES L375
Dynamics of Visual Representation II

Prerequisite: Dynamics of Visual Representation I (Comm. Studies L275) and approval of instructor; students must own the recommended type of camera. A study of the development of visual artifacts and media in the search for a more and more adequate mimesis of persons, situations, and meanings. The course comprises both the practical and theoretical aspects of the visual image, historically and currently, and examines the assumptions underlying the quest for the auto-communicative image. (6 credits)

COMMUNICATION STUDIES L378
Seminar and Practicum in Sound II

Prerequisite: Comm. Studies Major or Specialization. This course gives the student a knowledge of the basic disciplines necessary for constructing aural message forms from the simplest to the most complex; also experience in the various technologies required to apply these aural forms to radio, film, television, etc. Students will prepare, produce, and direct, individually and in teams, a number of projects. (6 credits)

COMMUNICATION STUDIES L381
Seminar and Practicum in Film II (16 mm)

Prerequisite: Above-average standing in Seminar and Practicum in Film I (Comm. Studies L281). This course involves an examination of the communicative process through the medium of film. Areas covered include scripting, directing and shooting with both silent and sync-sound equipment. Productions are designed to test the students' theoretical knowledge and give practical experience in the craft of film-making. (6 credits)

COMMUNICATION STUDIES L384
Seminar and Practicum in Film II (Super 8mm Sync Sound)

Prerequisite: Above-average standing in Seminar and Practicum in Film I (Comm. Studies L281). Students work in small groups in order to explore collectively the creative and communicative demands involved in making, publicizing and exhibiting a film. Special attention is given to the theory and practice of découpage, directing and shooting on location with lightweight equipment. (6 credits)

COMMUNICATION STUDIES L387
Seminar and Practicum in Television II

Prerequisite: Comm. Studies L287. A study of the components related to the creation of the television documentary and short feature program in terms of the theoretical possibilities inherent in the medium. Student productions in the two genres, from idea stage through completed videotape, constitute the laboratory section of the course (6 credits)

VISUAL ARTS — YR. III PROFESSIONAL CLUSTER

COMMUNICATION STUDIES L481
Seminar and Practicum in Film III (16mm and Super 8mm Sync Sound)

Prerequisite: Above-average standing in Seminar and Practicum in Film II (Comm. Studies L381 or L384) and approval of instructor. An advanced course in film theory and communication with exploration in a variety of film genres. Film-making processes covered will include scripting, directing, "A and B roll" editing, and shooting with crystal sync-sound equipment. The course is designed to permit advanced work in both 16mm and Super 8 Sync film formats. (6 credits)

COMMUNICATION STUDIES L487
Seminar and Practicum in Television III

Prerequisite: Above-average standing in Seminar and Practicum in Television II (Comm. Studies L387) and approval of the instructor. An advanced course in television theory and communication with exploration in a variety of television genres. Possible options, depending on the ability of the students in any one year, include the dramatic documentary and the complete adaptation for television of professional plays. (6 credits)

COMMUNICATION STUDIES L495
Honours Project in Research, Film, Television, Sound, Or Multi-Media

Prerequisite: Comm. Studies Specialization Univ III. Towards the end of second year, students of demonstrated scholarly and creative ability may propose, or be selected for, a major research or production in a Communications area of special interest. During third year, individually or in teams and in close collaboration with faculty directors, these students produce works acceptable for publication, public distribution or professional use. Projects normally emphasize a thematic approach, and require approval by a Senior Projects Committee. (6 credits)

51.9 Department of Computer Science

Assistant Professor and Chairman
A. K. MENON

Assistant Professors
B. C. DESAI
D. G. HALTRECHT

Lecturers
M. O. SMITH
G. WEISS

51.9.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1.

The superscript indicates credit value.

90 BSc Specialization in Computer Science

Prerequisites: Math 216A/B, 217A/B; Comp Sc 211, 241
Year I
6 Comp Sc 335[3], 337[3]
12 Math 321A[3], 334Z[6], 353A[3]
6 Nat Sc Elective credits (Bio, Chem, Geol, Phys, Health)
6 Elective credits
Year II
9 Comp Sc 223[3], 311[3], 435[3]
6 Math 301A[3], 311B[3]
3 Engin 511[3]
6 Nat Sc Elective credits (Bio, Chem, Geol, Phys, Health)
6 Elective credits
Year III
18 Comp Sc 343[3], 451[3], 513[3], 515[3], 533[3], 537[3]
6 Comp Sc Elective credits
6 Elective credits

90 BSc Specialization in Mathematics and Computer Science

Prerequisites: Math 216A/B, 217A/B; Comp Sc 211, 241
Year I
6 Comp Sc 341[3], 343[3]
18 Math 321B[3], 323B[3], 334Z[6], 341A/B[3], 343A/B[3]
6 Elective credits
Year II
6 Chosen from Comp Sc 423[3], 425[3], 427[3], 433[3], 451[3], 551[3] or 561[3]
15 Math 326Z[6], 353A[3], 402Z[6]
9 Elective credits
Year III
6 Comp Sc 424[6]
12 Comp Sc Elective credits
6 Math Elective credits
6 Elective credits

36 BSc Major in Computer Science

Year I
6 Comp Sc 335[3], 337[3]
6 Math 334Z[6]
Year II
6 Comp Sc 223[3], 311[3]
6 Math 321B[3] OR 323A[3], 353A/B[3]
Year III
6 Comp Sc 451[3], 551[3]
6 Comp Sc Elective credits

36 BAdmin Majors in Data Processing

See § 61.11
Year I
6 Comp Sc 221A[3], 223B[3]
Year II
12 Comp Sc 311A[3], 313B[3], 451A[3], 555B[3]
Year III
9 Comp Sc 521B[3], 523A[3], 525B[3]
9 Comp Sc Electives
NOTE: The above courses are given in the BComm programme on the Loyola Campus.

24 Minor in Scientific Computing

Year I
6 Comp Sc 211[3], 241[3]
Year II
6 Comp Sc 341[3], 343[3]
Year II or III
6 Comp Sc 335[3], 337[3]
6 Comp Sc Elective credits

24 Minor in Data Processing

Year I
6 Comp Sc 221[3], 223[3]
Year II
6 Comp Sc 311[3], 313[3]
Year II or III
6 Comp Sc 451[3], 555[3]
6 Comp Sc Elective credits
NOTE: The above courses are given in the BComm programme on the Loyola Campus.

51.9.2 COMPUTER SCIENCE

NOTE: This section of the Calendar describes only a few of the Computer-based programmes available to students at Concordia. Other programmes include Data Processing Electrical Engineering (See § 71); and the Computer Science programmes on the Sir George Williams Campus (See § 71).

The Bachelor of Science courses and programmes described below are intended particularly for students who expect to become users of computers in scientific or technical applications, and for scientists and engineers who want to learn how to apply the tremendous capabilities of computers in their work.

Students who intend to enter the Bachelor of Science programmes must complete the introductory courses Comp Sc 211 and 241, and Math 216 and 217 as a prerequisite. Exemption from these courses may be allowed for students who have had equivalent training in other institutions. Note that the entrance requirements for other computer based programmes are all different.

If you would like to study some other subject in addition to Computer Science, you may register for a Bachelor of Science degree with a Major programme (36 credits) in Computer Science, plus a Major or Minor of the Loyola Faculty of Arts and Science (subject to the approval of the two Departments). This will provide you with a broader knowledge at the expense of shorter training in Computer Science. The Major programme has the same prerequisites as the Specialization.

If you intend to specialize in some other Arts or Science discipline but would like at the same time to get a working knowledge of computers, you may apply for a Minor in Scientific Computing or in Data Processing, depending on your interest. These Minor programmes count as electives toward your University degree. There are no prerequisites necessary for the Minor programmes.

51.9.3 COURSE DESCRIPTIONS

COMPUTER SCIENCE 211
Introduction to Scientific Computing

Prerequisite: None. Coding of numerical and alphabetical data. General description of storage and 1/0 hardware. Organization and functioning of the central processing unit. The structure of a typical machine-language instruction and of a typical symbolic assembler-language program. The binary, octal and hexadecimal number systems. Flow charting and problem analysis. Elementary data structures. The use of interactive terminals and time-sharing. Mathematical models and methods used in typical applications in science and industry. Problems in simplified machine and assembler languages will be assigned, to be run on the computers. (3 credits)
NOTE: Students with credit for Comp Sc 221 or 301 may not take this course for additional credits. This course may not be taken for university credit by Computer Science students.

COMPUTER SCIENCE 221
Introduction to Business Computing

Prerequisite: None. An introductory course for students interested in the applications of computers in business and industry. (3 credits)
NOTE: Students with credit for Comp Sc 211 or 301 may not take this course for additional credit. This course may not be taken for university credit by Computer Science students.

COMPUTER SCIENCE 223
Data Processing Techniques

Prerequisites: Computer Science 221 or 211, or 301, Continuation of Computer Science 221, covering the equipment and methods used in data processing, to give the student as wide as possible an acquaintance with computers of all makes and models, communications and terminal equipment, and special input and output devices. The basic methods for collecting, verifying, preparing and disseminating information will be studied. Elementary programs in the BASIC language will be written and run by the students through the local time-sharing service. (3 credits)

COMPUTER SCIENCE 241
Elementary FORTRAN Programming

Prerequisite: Computer Science 211 or 221. The course will cover the following topics: preparing and submitting programs documentation; real arithmetic; integer arithmetic, mixed-mode arithmetic, simple input and output; control statements; DO loops; subscripted variables; formats; and sub-programs. Regular assignments will be given to be prepared, run, tested and documented by each student. Typically the assignments will require a total of 15 to 30 hours of work outside of class. (3 credits)
NOTE: This course may not be taken for university credit by Computer Science students.

COMPUTER SCIENCE 301
Computers in Society

Prerequisite: None. An introductory course for Arts students with no previous experience of computers. It covers the history of computers, the component parts of a computer, how human beings and computers pass information to each other, and what computers can (and cannot) be used for in the fields of education, research, business, medicine, art, government and the humanities. The effect of computers on society and the individual. Available as an elective for all students, but may not be taken for additional credit by students who already have credit for Comp Sc 211 or 221. (3 credits)

COMPUTER SCIENCE 311
Elementary Cobol Programming

Prerequisite: Computer Science 223. Covers the use of problem-oriented languages, an, introduction to business data processing, the concept of files and records, program logic and flowcharting. Introduction to the elementary coding rules of the Common Business Oriented Language (COBOL), with examples to be run on the computer. Top-down programming design and structured programming concepts will be emphasized. The work load is typically 4 to 10 hours per week outside of class. (3 credits)

COMPUTER SCIENCE 313
Business Applications of COBOL

Prerequisite: Computer Science 311. Covers elementary file organization and design, decision tables and logic diagrams, computer aspects of systems design, and examples of computer-oriented business systems. There will be a study and report on an actual commercial application. (3 credits)

COMPUTER SCIENCE 335
Computer Science Methodology and Techniques I

Prerequisite: Computer Science 211 and 241. Principles of structured programming and decision tables. Introduction to number systems and Boolean algebra. Structured flowcharting, problem analysis, and the design of solutions. (3 credits)

COMPUTER SCIENCE 337
Computer Science Methodology and Techniques II

Prerequisite: Computer Science 335. Introduction to discrete structures, basic graph theory and applications. Elementary organization of computer systems. Elements of file structures and file management. Macros and other programming concepts. A term project will be carried out under close supervision. (3 credits)

COMPUTER SCIENCE 341
Advanced FORTRAN Programming

Prerequisite: Computer Science 241. A continuation of Computer Science 241, using problems from numerical analysis as exercises in advanced Fortran programming. Operations involving logical, double-precision, complex and character-string variables. Extended input/output and format operations. Work load is typically 4 to 10 hours per week outside of class. *Lectures:* 2 hours per week. *Problems:* 1 hour per week. (3 credits)

COMPUTER SCIENCE 343
Computer Applications of Numerical Methods

Prerequisites: Computer Science 241; Mathematics 216. Concepts of numerical errors, interpolation and curve fitting. Solution of nonlinear equations by iteration. Numerical integration. Matrix operations and solution of systems of linear equations. Numerical solution of ordinary differential equations. Emphasis will be on the algorithms and standard subroutines available to solve these problems, and on practical computing experience rather than on mathematical study. *Lectures:* 2 hours per week. *Problems:* 1 hour per week. (3 credits)

COMPUTER SCIENCE 417
Commercial Software I

Prerequisite: Computer Science 313. A study of a representative sample of the software program packages available commercially for use in business applications, including systems packages such as file management, payroll, inventory, and bill-of-materials; and control packages such as critical path scheduling, linear programming, and simulation. Sources of software; criteria for evaluating and choosing packages; implementation, maintenance and modification of packages. Class and individual projects on the use of typical packages. (3 credits)

COMPUTER SCIENCE 419
Commercial Software II

Prerequisite: Computer Science 417. Continuation of Computer Science 417. (3 credits)

COMPUTER SCIENCE 421
Advanced Cobol Programming

Prerequisite: Computer Science 311. Continuation of Computer Science 311. Further work on decision tables and flow-charting. IBM's Job Control Language, various operating systems and core dumps. The use of Cobol verbs for searching, sorting, and reporting. The use of subscripts, labels and completion codes. Programs will be written and tested on the computer, involving the creation and updating of files. Top-down program design, structured programming, and chief-programmer team concepts will be emphasized. Work load is typically 4 to 10 hours per week outside of class. Lectures: 3 hours per week. (3 credits)

COMPUTER SCIENCE 423
Assembler Language Programming I

Prerequisite: Computer Science 311 or 341. Review of the basic concepts of IBM 360/370 architecture and instruction repertoire. Memory access and storage. Detailed flowcharting of problems. Rules for coding assembler language programs, including use of base registers, program linking and sectioning and the use of macro instructions. Documentation, debugging and testing of programs. Students will write and run several programs on an IBM 360/75 computer. Work load is typically 4 to 10 hours per week outside of class. (3 credits)

COMPUTER SCIENCE 424
Computer Applications of Statistics

Prerequisites: Computer Science 241 and one statistics course. This course is designed to familiarize the student with the application of computers to statistical problems. Computer terminals and batch processing of Fortran programs are used to develop a working knowledge of standard programs for control charts, analysis of experimental design, sampling plans, forecasting, and statistical analysis common to many other fields. Students are expected to be familiar with elementary statistics and to be able to program in FORTRAN. (6 credits)

COMPUTER SCIENCE 425
Mathematical Models of Real Systems

Prerequisites: Computer Science 241 or 311, and Mathematics 216 or Quantitative Methods C244. The use of a computer to study situations occurring in the real world, with examples taken chiefly from science and industry. How models are used to study interactions between the parts of a system to analyse the causes of observed effects, and to predict the effects of changed conditions. The scale, detail and boundaries of a model. The cyclic process of model development. Types of models available — deterministic, probabilistic, macroscopic or microscopic, optimizing. The course begins with simulation using a procedural language, followed by an introduction to special simulation languages. (3 credits)

COMPUTER SCIENCE 427
Assembler Language Programming II

Prerequisite: Computer Science 423. Continuation of Computer Science 423. Further exercise in assembler language programming for the IBM 360/370. A study of assembler languages for other computers, including UNIVAC 9300 and the DEC PDP-11. Work load is typically 4 to 10 hours per week outside of class. (3 credits)

COMPUTER SCIENCE 429
Teleprocessing

Prerequisite: Computer Science 233. The study of remote control of computers by human operators or by other computers. The following topics will be covered: the categories of data transmission systems, channel capacities, communication line characteristics, modems, coding systems, transmission modes, transmission errors, various types of dialogue between man and computer, networks, terminals and control units, programs and software. Text: J. Martin, *Introduction to Teleprocessing.* (3 credits)

COMPUTER SCIENCE 433
PL/1 Programming

Prerequisite: Computer Science 311 or 341. Study of the basic rules and important features of the PL/1 language. This will be integrated with the solution of a variety of practical computer programming problems, both scientific and commercial. Work load is typically 5 to 10 hours per week outside of class. (3 credits)

COMPUTER SCIENCE 435
Computer Architecture

Prerequisite: Computer Science 337. Introduction to logic functions and basic digital circuits. Implementation of logic functions, registers, encoders and decoders, adders and code conversion. The arithmetic-logic unit, control section, timing, memory and input/output. Micro-processors and micro-programming. (3 credits)

COMPUTER SCIENCE 445
R.P.G. Programming

Prerequisites: Computer Science 241 or 311. R.P.G. stands for Report Program Generator. This course is designed to teach the students the logic of the R.P.G. compiler. The knowledge gained in class will be utilized to solve problems and write about 5 programs geared for the business environment. There will be 3 lecture hours per week and approximately 5 to 10 hours of programming and debugging per week outside class. (3 credits)

COMPUTER SCIENCE 451
File Structure

Prerequisites: Computer Science 241 or 311. A detailed study of the file structures and storage structures most commonly used in data processing; information retrieval and systems software, including contiguous lists (with or without ordering), tree structures, indexed and inverted lists. The standard algorithms for accessing and updating these structures. Direct access and binary search methods. The management of memory space and overflow. A survey of simple sorting and Boolean search methods. Emphasis will be on the evaluation of the various methods, and the best choices for different applications. (3 credits)

COMPUTER SCIENCE 513
Programming Languages I

Prerequisites: Computer Science 335 and 337. Study of the important features of procedure - oriented languages, including PL/I, ALGOL, PASCAL, etc. The concept of the program as a data structure and its modification during execution. This study will be integrated with a variety of practical computer programming problems. (3 credits)

COMPUTER SCIENCE 515
Programming Languages II

Prerequisite: Computer Science 513. Continuation of Computer Science 513, including the study of list-processing and string languages such as SNOBOL, LISP, etc. The student will normally carry out a project in conjunction with any other third-year Computer Science course. (3 credits)

COMPUTER SCIENCE 521
Data Processing Management

Prerequisite: Computer Science 313. The theory and practice of management as applied in commercial data processing. Planning for new business systems and computers; the feasibility study; the computer as an aid in planning; the organization of a data centre; staffing the data centre; job description and job specifications; maintenance and security; control methods for operation, data entry, processing and output. (3 credits)

COMPUTER SCIENCE 523
Business Systems Analysis

Prerequisite: Computer Science 313 and Accounting C214. This course considers data processing from the point of view of systems personnel. Study areas are: (1) the uses, characteristics, and limitations of computers in business; (2) system components (cybernetic view); (3) methodology and techniques of systems analysis; (4) MIS; (5) the human factor. Class projects will cover the study of various simple applications of data-processing systems, from the original concept to the production and operation of the system. (3 credits)

COMPUTER SCIENCE 525
Business Systems Design

Prerequisite: Computer Science 523. A continuation of Computer Science 523. A study of the principles of data-processing system design, ensuring timely, complete and accurate data collection, efficient processing, effective disemination of information, and the evaluation, modification and control of the system. This will be illustrated by group projects and case studies. (3 credits)

COMPUTER SCIENCE 533
Computer Operating Systems

Prerequisite: Engineering C511. Review of computer system organization and control. Input-output routines. Job control programs for batch processing; translating, loading, linking, execution and accounting. File control systems for parallel input-output processing. The management of interrupts, buffers, spooling and memory protection. Operating systems for multi-programming computers. Time-sharing systems, and interactive processors with real-time application. (3 credits)

COMPUTER SCIENCE 537
Software Design and Programming

Prerequisite: Computer Science 533. Continuation of Computer Science 533. Storage organization, scheduling algorithms, resource allocation techniques, protection and communication. Detailed analysis of a small operating system. Structured multi-programming. The student will do a term project, which may be related to other third-year Computer Science courses, with the approval of the professors concerned. (3 credits)

COMPUTER SCIENCE 551
Theory of Automata

Prerequisite: Engineering C511. Theoretical description of computing machines. Finite State automata and sequential machines. The equivalence of states and machines; congruence;

reduced machines; analysis and synthesis of automata. Turing and other machines. Recursion and decidability. (3 credits)

COMPUTER SCIENCE 555
Information Systems

Prerequisite: Computer Science 451. A continuation of Computer Science 451, covering the problems of organization, storage, search and retrieval of information stored in large data bases. Dictionary construction and look-up, automatic indexing methods, search and matching procedures, information dissemination systems, commercial data-base management systems and application. Methods of user interaction and their application in management and decision-making. (3 credits)

COMPUTER SCIENCE 561
Computer Science Seminar and Project I

Prerequisite: Consent of the Department. Individual work on a computer science project under the supervision of a faculty member, and a series of seminars dealing with topics of current interest by faculty members, students and industry representatives. At least 60 hours of work must be done on a project approved in advance, including the submission of a technical report. Special arrangements can be made with the Department to accept a project carried out by a student employed in a commercial firm. (3 credits)

COMPUTER SCIENCE 563
Computer Science Seminar and Project II

Prerequisite: Computer Science 561. A continuation of the project begun in Computer Science 561. (3 credits)

51.10 Department of Economics

Associate Professor and Chairman
A. G. LALLIER

Professor
F. J. HAYES

Associate Professor
S. A. ALVI

Assistant Professors
G. K. HEWITT
N. ISLAM
Z. R. LIU
D. K. OTCHERE
R. T. POMFRET
D. SHAPIRO
W. A. SIMS
A. TAKAHASHI
B. WRIGHT

51.10.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1.

The superscript indicates credit value.

60 BA Honours in Economics

Year I
18 Econ L309[3], L310[3], L311[3], L312[3], L322[6]
Year II
12 Econ L404[6], and 6 credits chosen from: L451[3], L455[3], L462[6], L467[3], L471[3], L491[3], L493[3], L495[3]
6 Econ L304[6] or L414[6]
Year III
12 Econ L465[3], L481[3], and 6 credits chosen from: L451[3], L455[3], L462[6], L467[3], L471[3], L491[3], L493[3], L495[3]
12 Econ Elective credits divided over the three years. With the permission of the Department, 6 of these credits may be selected from a related discipline.

60 BA Specialization in Economics

Year I
12 Econ L309[3], L310[3], L311[3], L312[3]
Year II
6 Econ L404[6]
42 Econ Elective credits divided over the three years. With the permission of the Department, 6 of these credits may be selected from a related discipline.

36 BA Major in Economics

Year I
12 Econ L309[3], L310[3], L311[3], L312[3]
Year II
6 Econ L404[6]
18 Econ Elective credits divided over the three years.

30 Minor in Economics

Year I
6 Econ L309[3], L311[3]
24 Econ Elective credits divided over the three years.

51.10.2 DEPARTMENT OF ECONOMICS

The courses required for each programme must be taken in an approved sequence.

"Principles of Economics", or an equivalent course, is a prerequisite for all other Economics courses, except Economics L304. Additional prerequisites are indicated for each course. Alternative prerequisites in Economics or other disciplines may be approved by the Department.

Economics L209 and L210 or Economics L202 will count as one of the Economics electives in the case of students who are admitted without "Principles of Economics" or an equivalent course.

Admission into the Honours Programme requires approval of the Department following a recommendation from its Honours Committee. Students seeking admission to the Honours Programme on or after June 1, 1977, will be bound by the Honours requirements outlined § 16.2.4 of this Calendar. Students who already had Honours status by June 1, 1977, will continue to be governed by the requirements which applied at the date of their admission to the Honours Programme.

51.10.3 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.5.

ECONOMICS L202
Principles of Economics

This course is for students not majoring in Economics or proceeding to a BComm. Its content is essentially the same as that of Economics L209 and L210. However, there is

greater emphasis on Canadian economic institutions and government policies. (6 credits)

ECONOMICS L209
Introduction to Microeconomics
Introduction to the study of the market economy and its operation in Canada. A discussion of the determination of price through the interaction of supply and demand, the allocation of resources through the price mechanism, and government regulation and intervention. Topics include the theory of the consumer, the firm, the nature of perfect and imperfect competition, and the distribution of income. (3 credits)
NOTE: This course may not be taken by students who have received credit for the following Loyola courses: Economics 200, Economics 300, or Economics 302.

ECONOMICS L210
Introduction to Macroeconomics
An introduction to the theory of aggregate economic activity. The theory of national income accounting and determination, and the role of government policy in promoting economic stability. Topics include the theory of unemployment, inflation, fiscal and monetary policy and the balance of payments. (3 credits)
NOTE: This course may not be taken by students who have received credit for the following Loyola courses: Economics 200, Economics 300, or Economics 302.

ECONOMICS L304
Economic History
An analysis of the economic development of Western Europe, Canada and the United States. (6 credits)

ECONOMICS L307
The Chinese Economy
This course is devoted to an analysis of Chinese economic development since 1949. Topics include: performance and efficiency, strategy for development, agricultural organization, the contribution of policy to economic growth, the industrial sector, control and allocation of resources, national economic planning. (3 credits)

ECONOMICS L309
Intermediate Microeconomic Theory I
In this course consideration will be given to such topics as theory and measurement of demand, theory of consumer behaviour, production functions, cost analysis, price and output policy under various market conditions, with emphasis on perfect competition and monopoly. (3 credits)

ECONOMICS L310
Intermediate Microeconomic Theory II
Prerequisite: Economics L309. This course will cover the following topics: oligopoly, monopolistic competition, industrial concentration, factor markets, functional income distribution, general equilibrium and the elements of welfare economics. (3 credits)

ECONOMICS L311
Intermediate Macroeconomic Theory I
An analysis of the major areas of aggregate economics. Topics would include the definition and measurement of national income and the theory of income determination in the classical and in the Keynesian systems. (3 credits)

ECONOMICS L312
Intermediate Macroeconomic Theory II
Prerequisite: Economics L311. Topics will include review of the complete Keynesian system, business cycles, economic fluctuations in Canada, inflation and unemployment theories, macroeconomic policies, economic growth, and their theory and application to Canada. (3 credits)

ECONOMICS L322
Mathematics for Economists
Prerequisites: CEGEP 101 or Math 213; and Math 214 or equivalent. An introductory application of Mathematics to economic analysis. Topics include analytical geometry and linear algebra, differential and integral calculus, differential and difference equations, matrix algebra and optimization techniques with economic applications. (6 credits)

ECONOMICS L333
(Also given as Interdisciplinary Studies L233)
Economics of the Environment
This course will be devoted to an examination of the economic aspects of current environmental problems. Topics will include: economy, ecology, and the environment; economic growth and the environment: the circular flow of economic activity and spaceship earth; private and social costs; market failure, externalities, and collective goods; fiscal instruments and pollution; an evaluation of federal and provincial policies. (3 credits)

ECONOMICS L338
Contemporary Economic Issues
Prerequisites: Restricted to first year Economics students or any non-Economics students. An analysis of some economic issues facing Canada. For example: unemployment, inflation, monopoly and competition, foreign ownership and control, income distribution, regional disparities, monetary and fiscal policies, etc. Theoretical concepts will be developed as needed. (6 credits)

ECONOMICS L401
Theories of Economic Growth
The meaning and concept of economic growth, measurement of growth, economic and non-economic factors of growth, the concept of scarcity of resources and their allocation, stages and models of growth, obstacles to growth, human and physical capital and economic growth, foreign trade and foreign aid; developing economies and economic policies and the development of nations. (3 credits)

ECONOMICS L402
Labour Law
The development of the trade union movement and early labour legislation in the U.S.A. and Canada; collective bargaining; labour law in Canada and Quebec today with emphasis on the Industrial Relations and Disputes Investigations Act (Canada), the Quebec Labour Code and related statutes. An in-depth study of employer's free speech; evocation in matters of arbitration awards; injunctions; successor rights. Practice and procedure before the courts and labour relations boards and commissions. (6 credits)

ECONOMICS L403
Planning for Economic Growth
The meaning and concept of economic planning, methodology and strategy of planning, input-output and sector analysis, techniques of planning, investment criteria and priorities, study and appraisal of economic plans of a few countries. (3 credits)

ECONOMICS L404
Statistical Methods

Prerequisite: None. Introduction to the application of statistical methods of economic problems, including probability, testing hypotheses, time series, correlation and linear regression analysis. (6 credits)

ECONOMICS L405
Economic Fluctuations

Prerequisite: Economics L311. A review of some theories of causes of economic fluctuations. Discussion of the economic climate and of stabilization policies. (3 credits)

ECONOMICS L407
Money and Banking

Prerequisites: Economics L309 and L311. The functions of money, money and prices, the evolution and kinds of money, the value of money, the supply of money, monetary and banking developments in Canada, monetary theory, international monetary system, monetary policy. (3 credits)

ECONOMICS L411
Economics of Transportation and Communications

Prerequisite: Economics L309. Demand, cost and pricing in the transportation and communications industry; implications for development and for the location of industry; public policies. (3 credits)

ECONOMICS L413
Economics of Socialism

Prerequisites: Economics L309 and L311. The economic theory of socialism; Soviet, Yugoslav and other economies; problems of planning and development. (3 credits)

ECONOMICS L414
Economic History of Canada

This course will explore the economic history of Canada from the early days of settlement to the present time. Emphasis will be placed on economic development since 1867. Particular attention will be given to development in the Province of Quebec. (6 credits)

ECONOMICS L418
Regional Economics

Prerequisites: Economics L309 and L311. Regional economic analysis, regional accounts, inter-regional trade, industrial location, regional disparities, the regional distribution of resources and their relevance for development, characteristics of the resource industries, inter-regional migration, the impact of foreign investment and control, the city and the region, federal and provincial policies. (6 credits)

ECONOMICS L434
Comparative Economic Systems

Prerequisite: Economics L309. The evolution of economic systems is discussed and evaluated in terms of modern economic theory, and from the point of view of economic efficiency and development. (6 credits)

ECONOMICS L436
Economic Welfare and Governmental Activity

Prerequisites: Economics L309 and L311. The first part of this course will provide a foundation in the language of theoretical welfare economics: general equilibrium, welfare criteria, and propositions, and the anatomy of market failure. This will be followed by a study of the following topics: concept of a public good, budget determination through voting, types and growth of government expenditure, equity in personal income taxation, corporate income tax, indirect taxes, tax reform, negative income taxes, and cost-benefit analysis. (6 credits)

ECONOMICS L438
Labour Economics

This course deals with labour force concepts and analysis; labour markets and other aspects of demand for and supply of labour; population, immigration and participation rates; theory of wages; structure and determination of wages; minimum wage and manpower policies. Emphasis will be on the Canadian institutions. (6 credits)

ECONOMICS L440
Economics of Social Welfare

Prerequisites: Economics L309 and L311. This course will be devoted to an examination of the economic aspects of social welfare issues in Canada. Topics will include: employment and unemployment; manpower problems and policies; inequality, poverty, social insurance and social assistance; investment in man, especially education and health; urban and regional development; environmental economics; federal, provincial, and municipal policies. (6 credits)

ECONOMICS L445
Industrial Organization

Prerequisite: Economics L309. Structure of the Canadian and U.S. economies; the determinants of market structure; theory and empirical evidence relating to price and output policies in different market structures; policies. (3 credits)

ECONOMICS L447
International Trade

Prerequisites: Economics L309 and L311. The basis of international trade, gains from trade, factor-price equalization, the tariff, Canadian commercial policy, trade and development, economic integration. (3 credits)

ECONOMICS L448
Industrial Relations

Study of industrial relations and industrial relations system; philosophies and growth of trade union movement; philosophies and practices of management; collective bargaining; industrial disputes and their settlement; weapons of conflict; automation, inflation and unemployment; labour management co-operation in achieving social goals. Emphasis will be placed on industrial relations in Canada. (6 credits)

ECONOMICS L449
International Finance

Prerequisite: Economics L447. International monetary economics, foreign exchange markets, adjustment mechanisms, capital flows, balance of payments and domestic policy goals, international liquidity. (3 credits)

ECONOMICS L451
Welfare Economics

Prerequisites: Economics L309, L310, L311, and L312. This is an advanced course for Honours students; and for Major students with the consent of the professor. The course will be devoted to an examination of selected topics in contemporary welfare economics and its applications. (3 credits)

ECONOMICS L455
Introduction to Econometrics

Prerequisites: Economics L309, L310, L311, L312, and L404. This is an advanced course for Honours students; and for Major students with

the consent of the professor. Topics to be covered in this course include: classical linear regression; problems arising out of errors in variables; autocorrelation; multicollinearity; heteroscedasticity; use of lagged and dummy variables; simultaneous equation problems. (3 credits)

ECONOMICS L462
History of Economic Thought

Prerequisites: Economics L309, L310, L311, and L312. This is an advanced course for Honours students; and for Major students with the consent of the professor. An analysis and critical review of the evolution of economic thought from Plato and Aristotle to post-Keynesian economics. (6 credits)

ECONOMICS L465
Advanced Microeconomic Analysis

Prerequisites: Economics L309, L310, L311, L312, and L322. This is an advanced course for Honours students; and for Major students with the consent of the professor. Mathematical exposition of the theory of consumer behaviour and demand; theory of production and cost; theory of the firm and market organization; theory of distribution. (3 credits)

ECONOMICS L467
Advanced Monetary and Income Theory

Prerequisites: Economics L309, L310, L311, L312, and L407. This is an advanced course for Honours students; and for Major students with the consent of the professor. The course will cover a number of selected topics, including the Classicals and Keynes and post-Keynesians; liquidity preference and loanable funds; money and real interest rates; monetary theory and its applications. (3 credits)

ECONOMICS L471
Introduction to Linear Programming and Input-Output Analysis

Prerequisites: Economics L309, L310, L311, L312, and L322. This is an advanced course for Honours students; and for Major students with the consent of the professor. Topics include linear programming and input-output analysis; basic concepts and solutions of linear programming, its application to optimum resources allocation; exposition of basic inter-industry theory with the framework of input-output techniques; its applications to structural analysis. (3 credits)

ECONOMICS L481
Advanced Macroeconomic Analysis

Prerequisites: Economics L309, L310, L311, L312. This is an advanced course for Honours students; and for Major students with the consent of the professor. A critical examination of selected topics in aggregative economic analysis. (3 credits)

ECONOMICS L491
Honours Thesis

An Honours thesis including independent reading and research under the supervision of a professor. (3 credits)

ECONOMICS L493
Advanced Topics in Economics

This course focuses on advanced topics of interest in Economics. Content will depend on the theme designated by the Department, which varies from year to year. (3 credits)

ECONOMICS L494
Advanced Topics in Economics

A student may repeat L493, provided that the content is different, by registering for credits under Economics L494. (3 credits)

ECONOMICS L495
Advanced Topics in Economics

This course focuses on advanced topics of interest in Economics. Content will depend on the theme designated by the Department, which varies from year to year. (3 credits)

ECONOMICS L496
Advanced Topics in Economics

A student may repeat L495, provided that the content is different, by registering for credits under Economics L496. (3 credits)

The following course is a university level course which was offered in the year indicated but did not appear in the official Calendar.

1976-77
ECONOMICS 502Z
Labour Law
(6 credits)

51.11 Department of English

Assistant Professor and Chairman
P. J. HOLLAND

Associate Professors
A. T. BROES
E. CAMERON
J. S. HERZ
R. K. MARTIN
A. NEWELL
L. P. NOWICKI
M. PHILMUS
R. PHILMUS
R. S. WAREHAM
K. E. WATERS

Assistant Professors
L. R. HALLETT
H. HILL
D. TAYLOR

51.11.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1.

The superscript indicates credit value.

60 BA Honours in English

The following courses constitute an Honours programme provided the student maintains the required academic standing.

Year I

18 Students must take 18 credits from the list of courses below (i.e., English 300 level courses) with at least 6 credits from Group A and 6 credits from Group B. The remaining 6 credits may be taken from either group of courses.
- A. Engl L300^6, L301^3, L302^6, L303^3, L304^6, L305^3, L307^3, L309^3, L311^3, L313^3
- B. Engl L341^3, L342^6, L343^3, L345^3, L346^6, L347^3, L352^6, L355^3, L357^3, L363^3, L364^6, L365^3

Years II and III

6 Engl L418^6

9 Chosen from Engl L400^6, L402^6, L405^3, L407^3, L409^3, L410^6, L412^6, L413^3, L415^3, L417^3, L420^6, L424^6

9 Chosen from Engl L417^3, L424^6, L425^3, L426^6, L427^3, L429^3, L433^3, L435^3, L434^6

6 Chosen from Engl L437^3, L438^6, L439^3, L441^3, L443^3, L444^6

12 Engl Elective credits (up to six credits may be chosen from an approved cognate course)

NOTE: The Honours programme satisfies all the requirements of the Specialization. It is particularly recommended for students intending to pursue Graduate studies in English literature.

72 BA Joint Honours in French and English*

30 French: 6 credits in the XXth century; 6 credits in Quebec literature; 12 credits chosen from the XVIIth, XVIIIth and XIXth century; Fr L210^6 or L211^3 plus 3 credits in the missing century (XVIIth, XVIIIth, XIXth century).

30 English: 6 credits chosen among the following: L300^6 L301^3, L302^6, L303^3, L304^6, L305^3, L307^3, L309^3, L311^3, L313^3 18 credits chosen by genre or by periods paralleling the choice in French courses; 6 Elective credits chosen from the list of Honours and Major courses.

12 Credits will be chosen as follows: either 6 credits in each of two departments or a corresponding combination of "Independent Studies" carried out in each of the two departments.

**NOTE: Sequence of courses to be determined in consultation with the departments concerned.*

72 BA Joint Honours in English and History

6 Engl L418^6

18 Engl credits chosen from three different periods, at least two of which should be supported by parallel Hist courses

6 Engl Elective credits

6 Engl or Hist Elective credits

12 Hist credits to parallel Engl courses

12 Hist Honours Seminars

6 Hist Elective credits

6 Joint Engl/Hist Tutorial, Engl L490^6 or Hist L490^6

72 BA Joint Honours in English and one of the Modern Languages

6 Engl L418^6

18 Engl credits chosen from three different periods to parallel Modern Language courses

6 Engl Elective credits

18 Credits chosen from *one* modern language in different periods to parallel English courses

12 Elective credits from *one* modern language

6 Engl or Modern Language Elective credits
6 Joint English/Modern Languages Tutorial, Engl L492[6]

60 BA Specialization in English

Year I
18 Students must take 18 credits from the list of courses below (i.e., English 300 level courses) with at least 6 credits from Group A and 6 credits from Group B. The remaining 6 credits may be taken from either group of courses.
A. Engl L300[6], L301[3], L302[6], L303[3], L304[6], L305[3], L307[3], L309[3], L311[3], L313[3]
B. Engl L341[3], L342[6], L343[3], L345[3], L346[6], L347[3], L352[6], L355[3], L357[3], L363[3], L364[6], L365[3]

Years II and III
6 Engl L418[6]
18 Credits to be chosen from three different periods of English literature
18 Engl Elective credits (up to six credits may be chosen from an approved cognate course)

60 BA Specialization in English and History

12 Engl credits chosen from two different periods which should be supported by parallel History courses
18 Engl Elective credits
12 Hist credits to parallel Engl courses
18 Hist Elective credits
NOTE: This programme replaces the Joint Majors programme.

60 BA Specialization in English and Drama

6 Engl L418[6]
9 Engl L307[3], L417[3], L429[3]
15 Engl Elective credits
6 Theatre C201[3], C301[3]
3 Scenography C201[3]
6 Theatre Performance C201[3], C202[3]
6 Chosen from Production C201[3], C301[3], C302[3], C401[3]
9 Theatre Arts Elective credits

60 BA Specialization in English and one of the Modern Languages

6 Engl L418[6]
12 Engl credits chosen from two different periods to parallel Modern Language courses
12 Engl Elective credits
12 Credits chosen from *one* modern language in *two* different periods to parallel Engl courses
18 Elective credits chosen from one modern language
NOTE: This programme replaces the Joint Majors programme.

42 BA Major in English

Year I
18 Students must take 18 credits from the list of courses below (i.e., English 300 level courses) with at least 6 credits from Group A and 6 credits from Group B. The remaining 6 credits may be taken from either group of courses.
A. Engl L300[6], L301[3], L302[6], L303[3], L304[6], L305[3], L307[3], L309[3], L311[3], L313[3]
B. Engl L341[3], L342[6], L343[3], L345[3], L346[6], L347[3], L352[6], L355[3], L357[3], L363[3], L364[6], L365[3]

Years II and III
6 Engl L418[6]
12 Credits chosen from the list of Honours and Majors courses covering at least two different periods before the 20th century
6 Engl Elective credits

60 BA Major in Drama

27 Theatre C201[3], C301[3], Scenography C202[3], Theatre Performance C201[3], C202[3], Production C201[3], C301[3], C302[3], C401[3]
21 Drama Elective credits
12 Drama Literature Elective credits
For a complete listing of Drama courses, please consult § 81, Performing Arts Division.

24 Minor in English Language

18 Engl L204[6], L400[6], L475[3], L477[3]
6 Chosen from Engl L280[6] or L402[6], or Engl L405[3] and 3 Engl Elective credits in consultation with department chairman.

24 Minor in English Literature

24 credits chosen in consultation with the English Department
9 Chosen from Engl L300[6], L301[3], L302[6], L303[3], L304[6], L305[3], L307[3], L309[3]
6 Engl L311[3], L313[3]
9 Engl Elective credits

24 Minor in English Dramatic Literature

3 Engl L307[3]
3 Engl L417[3]
6 Engl L418[6]
3 Engl L429[3]
6 Chosen from Engl L214[6], L216[6], L272[6]
3 Engl Elective credits

51.11.2 DEPARTMENT OF ENGLISH

200 level courses are open to all students and may be used as English electives unless otherwise indicated.

300 and 400 level courses are more particularly designed to fulfill requirements for students in an English programme, but may be used as electives (by students for other departments) if departmental permission is obtained.

For the first year, all students are expected to take 18 credits from the two groupings of courses listed above as Year I requirements for English programmes, designed to provide a basis for more advanced studies.

Over the second and third years, Major students must take one Shakespeare course (L418 - 6 credits), 12 credits in Pre-20th Century, and 6 English Elective credits. Students in the Specialized programme must take 6 credits in Shakespeare (L418), 18 credits from three different periods including the 20th Century, and 18 Elective credits.

Honours students must follow a more historically-oriented programme. 9 credits must be chosen in courses before the 17th Century, 9 credits from the 17th and 18th Centuries (distributed over both centuries), 6 credits from the 19th Century, 6 credits in Shakespeare (L418) and 12 Elective credits. Students in the Specialized and Honours programmes should plan to take 6 of their Elective credits in a cognate course(s) offered by the Classics Department. Admission to the Honours programme is granted at the end of the student's first year after departmental review. Students seeking admission to the Honours programme on or after June 1st 1977 will be bound by the Honours requirements outlined in § 16.2.4 of this Calendar. Students who already had Honours status by June 1st 1977 will continue to be governed by the requirements which applied at the date of their admission to the Honours programme.

51.11.3 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.5.

NOTE: The courses listed here constitute the total offering of the English Department. Not all courses are offered in any one year. Consult departmental brochure for a fuller description of courses and accurate information concerning offerings and scheduling.

ENGLISH L200
Introduction to Literature and Composition
Selected readings from various periods and genres, designed to provide familiarity with some of the possibilities of the literary art. Students will be asked to write frequently and will be given training and assistance in the skills of composition. Certain sections will deal exclusively with composition; others will put greater emphasis on literature. Please consult department before registering. (6 credits)
NOTE: Credit for this course may not count toward the English Major.

ENGLISH L204
Essay Writing
Designed for the student who can spell and construct sentences, but would like assistance in matters of structure, emphasis, fluency, diction and logic. (6 credits)
NOTE: Credit for this course may not count toward the English Major.

ENGLISH L205
Style in Writing
Designed for the student who can spell and construct sentences, but would like assistance in matters of structure, emphasis, fluency, diction and logic. (3 credits)
NOTE: Credit for this course may not count toward the English Major.

ENGLISH L206
Rhetoric
An inquiry into the nature and function of Rhetoric (classical and "New"), and of rhetorical criticism; a study of the fundamentals, and some of the refinements, of prose style; logical and rhetorical analysis, and original compositions. (6 credits)

ENGLISH L208
Comedy
The theory and practice of Comedy as a literary mode. (6 credits)

ENGLISH L210
Tragedy
The theory and practice of Tragedy as a literary mode. (6 credits)

ENGLISH L212
Shakespeare
Students will not only read a number of Shakespeare's plays but will also attend performances of them, as available. Scenes will be considered in terms of staging various possible interpretations, and the class may assist with a production. The course is intended to develop an appreciation of Shakespeare's plays as works for the stage. (6 credits)

ENGLISH L214
Studies in Drama
This course will study different kinds and periods of drama each year. (6 credits)

ENGLISH L216
Modern Drama
The discussion will center on major works of the most influential British, Continental, and American dramatists. (6 credits)

ENGLISH L218
Introduction to American Studies
An interdisciplinary consideration of the elements that go toward making up the "American Character" and the nature of art and culture in America: studies in literature, history, sociology, psychology, religion and fine arts. (6 credits)

ENGLISH L220
American Writers of the '20s
A study of the American expatriate generation of the 1920s, with particular emphasis on Fitzgerald, Hemingway, Gertrude Stein, and their relationships with the cultural and artistic milieu centered in Paris. (6 credits)

ENGLISH L223
Modern American Fiction
The twentieth century American novel up to 1945. Authors read will include Dreiser, Faulkner, West, H. Roth and Wright. (3 credits)

ENGLISH L225
Contemporary American Fiction
The twentieth century American novel since 1945. Authors read will include Faulkner, Warren, F. O'Connor, Bellow and Mailer. (3 credits)

ENGLISH L233
Canadian Literature I
Through readings in fiction, this course will examine themes and styles in Canadian Literature. (3 credits)

ENGLISH L235
Canadian Literature II
Through readings in poetry, this course will examine themes and styles in Canadian Literature. (3 credits)

ENGLISH L236
Canadian Criticism, Thought, and Controversy
Prerequisite: One course in Canadian literature. An examination of the origins of literary criticism in Canada and the main aspects of its development to the present. The following critics will be considered: E. K. Brown, Edmund Wilson, H. A. Innes, G. Grant, Northrop Frye, Marshall McLuhan, Milton Wilson, George Woodcock, D. G. Jones, Margaret Atwood. (6 credits)

ENGLISH L237
Women In Literature I

A selection of short stories, poems and plays (by Ibsen, Lawrence, Mailer, Pinter, Plath, Lessing, Atwood, Alice Munro, Gwendolyn MacEwen and others) in which woman is of major importance, either as the central experiencing character in adolescence, maturity and old age, or as the embodiment of sexual archetypes and social roles. (3 credits)

ENGLISH L239
Women In Literature II

Prerequisite: English L237 or a course which has stressed the novel as a form. A study of some women novelists emphasizing Charlotte Bronte, Virginia Woolf, Doris Lessing and Margaret Atwood, and including a few others from among George Eliot, Jean Rhys, Sylvia Plath, Margaret Drabble, Margaret Laurence, Marian Engel, Sheila Watson, Alice Munro. (3 credits)

ENGLISH L240
The Novel and its Relation to Twentieth Century Art Theory

Prerequisite: This course is limited to second and final year students. A study of the twentieth-century novel as symptomatic of the profound changes in European thought on art occuring at the end of the nineteenth and beginning of the twentieth century. The course is largely concerned with the premise that the phenomenon of literary art is greatly clarified by approaching it from an understanding of the aims and capacities of other art forms. In addition to the consideration of a limited number of theoretical texts the course includes the practical study of, among others, the novels of Virgina Woolf, Galsworthy, James Joyce, E. M. Forster, Joyce Cary and Lawrence Durrell. (6 crédits)

ENGLISH L241
Continental Literature

An introduction to the major works of European literature of the nineteenth and twentieth centuries. Intended as background for students of English or French literature. Reading will include Goethe's *Werther* and *Faust*, Dostoevsky's *Crime and Punishment*, Mann's *Death in Venice*, Weiss' *Marat/Sade*, among others. The works will be treated from a comparative, an historical and an intrinsic point of view. (3 credits)

ENGLISH L244
Epic Forms In Modern Fiction

The course is designed to examine epic structures and modes in representative works of English and American fiction of the nineteenth and the twentieth centuries. (6 credits)

ENGLISH L246
Literature: Ideas and Myths

An exploration through literature of some of the myths which generate our ideas and some of the ideas which rationalize our myths. A study of *Gilgamesh, The Republic of Plato, Antony and Cleopatra, The Marriage of Heaven and Hell, Crime and Punishment, 2001, and other works. (6 credits)*

ENGLISH L248
Writing Workshop A

Intensive and individualized work in Creative Writing. The genre (prose, poetry, etc.) will vary from year to year. (6 credits)

ENGLISH L250
Writing Workshop B

A student may repeat English L248, provided that the content is different, by registering for credits under English L250. (6 credits)

ENGLISH L252
The Psychological Novel

Study of the development of the modern psychological novel from the nineteenth century to the present, with emphasis upon the interrelationship between psychology and literature. Part of the course will focus on material other than the novel. Close analysis of the tendency to portray the subjective world by means of dream; interior monologue, and stream of consciousness will be stressed. (6 credits)

ENGLISH L254
Psychology and Literature

A study of the relationship between the basic theories of psychology and psychoanalysis and aesthetics and literary criticism, through a consideration of the Oedipus complex in *Oedipus Rex, Hamlet,* and *Sons and Lovers,* and of archetypes and mythic patterns in literary and pseudo-literary forms such as fairy tales, children's stories and comic strips. (6 credits)

ENGLISH L256
The Short Story

The aims of this course are to familiarize students with the forms and techniques of the short story and to discover something of the considerable depth and breadth of experience that an accomplished writer can concentrate into the microcosm of this particular form of fiction. (6 credits)

ENGLISH L260
Children's Literature

Historical and thematic survey of children's fiction. (6 credits)

ENGLISH L262
The Bible as Background to English Literature

The course will begin by considering which translations of the Bible had the greatest influence on English literature and then will proceed to a study of literary handling of Biblical material and literary uses of Biblical allusion. (6 credits)

ENGLISH L264
Satire

The theory and practice of Satire as a literary mode. (6 credits)

ENGLISH L270
Science Fiction

An exploration of the varieties and nature of science fiction from H. G. Wells to Ursula LeGuin. Readings will include examples of English and American science fiction and translations of foreign works. Among the authors studied will be Huxley, Orwell, Zamyatin, Jack London, Capek, Borges, Calvino, and Lem. (6 credits)

ENGLISH L272
The Oral Interpretation of Poetry and Drama

The aim of this course is to produce a deeper appreciation of the rhythm and texture of the written word. We shall choose scenes from plays and study the relationship of dialogue to character, emphasis to meaning. (6 credits)

ENGLISH L280
Translation
Prerequisite: Fluency in both French and English. Intensive work to improve the student's skill at translating a variety of texts from French to English. Emphasis will be placed on non-literary texts. Training will be given in style and idiom. The course will help the student gain proficiency in rendering a variety of French texts in idiomatic English prose. (6 credits)

ENGLISH L300
Practical Criticism
Through an examination of how language works, in ordinary life as well as in literature, this course will aim at developing discrimination and a greater understanding and appreciation of linguistic and literary skills. (6 credits)

ENGLISH L301
Critical Reading
A close examination of literary works of every genre and most major periods from a variety of critical perspectives. (3 credits)

ENGLISH L302
Fiction
A selective study of the novel as form, the works to be chosen from English and American fiction. Close textual analysis, psychic and archetypal patterns, and the development of technique will be emphasized. (6 credits)

ENGLISH L303
Forms of Fiction
A study of various kinds of novels written in the last two centuries. (3 credits)

ENGLISH L304
Understanding Poetry
The concepts and methods of reading poetry, beginning with simple examples and proceeding through poems of graduated difficulty. Recommended for students who would really like to learn how to understand poetry. (6 credits)

ENGLISH L305
Poetry
A course for Honours and Majors students who would like to know why "what oft was thought" was "ne'er so well expressed." The emphasis will be on the variety of ways by which a poem translates a private perception into a communicated perception. (3 credits)

ENGLISH L307
Drama
A study of a varied selection of plays from both an historical and a generic point of view that will introduce students to the problems and delights of reading, visualizing, making and seeing plays. (3 credits)

ENGLISH L309
Non-Fiction Prose
A study of the forms of non-fiction prose — the essay, *belles-lettres*, the diary, the memoir — from the Elizabethans to the 20th Century. (3 credits)

ENGLISH L311
Major Developments in English Literature I
This course aims to produce a better understanding of important artistic and intellectual developments from the Middle Ages to the end of the seventeenth century through a close study of some major, but not simply "typical", literary works. The course will be designed to be of help both to English Majors desiring a background and framework for their period courses and to general Arts students desiring to broaden their familiarity with literature. (3 credits)

ENGLISH L313
Major Developments in English Literature II
A continuation of English L311 concentrating on the eighteenth, nineteenth and twentieth centuries. (3 credits)

ENGLISH L342
Twentieth Century British Literature
Authors will be chosen from among: Lawrence, Joyce, Yeats, Woolf, Lessing, Shaw, O'Casey, Forster, Waugh, Auden, Eliot. (6 credits)

ENGLISH L341
Twentieth Century British Literature I
To the end of World War I: works by some of the following authors: Conrad, Hardy, James, Shaw, Joyce, Lawrence, Yeats, Wilfred Owen, Rupert Brooke and G. M. Hopkins. (3 credits)

ENGLISH L343
Twentieth Century British Literature II
Post World War 1 to the Present: from among T. S. Eliot, E. M. Forster, Virginia Woolf, Waugh, Auden, Beckett, Osborne, Sillitoe, Pinter, Doris Lessing, Anthony Burgess, contemporary poets. (3 credits)

ENGLISH L345
American Literature: Nineteenth Century
A study of major nineteenth century American authors. (3 credits)

ENGLISH L346
American Literature
A study of archetypal patterns, literary and philosophical concerns of nineteenth and twentieth century American Literature. Reading material will be chosen from among: Poe, Thoreau, Hawthorne, Melville, James and Twain, in the first semester and from Norris, Anderson, Fitzerald, Hemingway, Faulkner, West, Steinbeck, Mailer, Kerouac, Salinger and Updike in the second semester. (6 credits)

ENGLISH L347
American Literature: Twentieth Century
A study of major twentieth century American authors. (3 credits)

ENGLISH L352
An Introduction to Canadian Literature
An historical survey of the main themes in Canadian literature will be illustrated from the major writers of poetry, fiction and drama. (6 credits)

ENGLISH L355
Commonwealth Literature I
Selected novels, short stories and poetry from West Africa, East Africa and the Caribbean. (3 credits)

ENGLISH L357
Commonwealth Literature II
Selected novels, short stories and poetry from South Africa, Rhodesia, India, Australia and New Zealand. (3 credits)

ENGLISH L363
Modern Fiction I
Shorter works of nineteenth and twentieth century American and European novelists. Authors read will include Dostoevsky, Tolstoy, Conrad, Faulkner, Camus and Grass. (3 credits)

ENGLISH L364
Modern Fiction
A study of the major modern British, American and Continental novelists. (6 credits)

ENGLISH L365
Modern Fiction II
Same authors as in L363, but their longer works will be studied. (3 credits)

ENGLISH L400
History of the English Language
A study of the development of the language from its beginnings to the twentieth century: a course designed partly for those students intending to go on to further studies in English at graduate school, and partly for those interested in languages in general. (6 credits)

ENGLISH L402
Anglo-Saxon
An introduction to the study of Old English (Anglo-Saxon). (6 credits)

ENGLISH L405
Middle English
A study of selected essential texts of early Middle English. (3 credits)

ENGLISH L407
Chaucer I
A study of *The Canterbury Tales* in general, and of six or seven tales in particular. (3 credits)

ENGLISH L409
Chaucer II
Prerequisite: English L407. A study of *Troilus and Criseyde* and selected early poems. (3 credits)

ENGLISH L410
Medieval Literature
A study of the literature from the 12th century through Malory, exclusive of Chaucer. The major emphasis will vary from year to year, e.g., Medieval drama, romanance. Langland, the *Pearl* poet. (6 credits)

ENGLISH L412
Masterpieces of English Literature Written Before 1603
A course designed to introduce the student to the origin and development of English literature in the Anglo-Saxon, Medieval and Tudor periods. *Beowulf* (in translation). Anglo-Saxon culture and poetry (in translation). Introduction to the works of Chaucer, Malory, and other works from the period after 1066. Introduction to Spenser and other representative authors of the Tudor period. Introduction to the origin and development of drama before Shakespeare. Introduction to the history of the English language up to 1603. (6 credits)

ENGLISH L413
Spenser and his Background
This course is intended to examine Spenser's works — *The Amoretti* and *The Faerie Queene* in particular — and their relations to the pertinent literary traditions, both English and continental. (3 credits)

ENGLISH L415
Elizabethan Prose and Poetry
Significant works of Elizabethan non-dramatic literature will be studied both as individual creations and as samples of the most important trends in non-dramatic verse and prose of the time. (3 credits)

ENGLISH L417
Elizabethan and Jacobean Drama
Representative plays to be read will be selected from the works of some of the following contemporaries of Shakespeare in the golden age of English drama: Kyd; Marlowe, Lyly, Heywood, Jonson, Webster, Tourneur, Marston, Middleton, Beaumont and Fletcher, Massinger, Ford. (3 credits)

ENGLISH L418
Introduction to Shakespeare
An introduction to a wide range of Shakespeare's plays and some of his non-dramatic poetry. (6 credits)

ENGLISH L420
The Rise of Prose Fiction
The course will explore the origin and development of European fiction in major works of the Middle Ages and the Renaissance, giving particular attention to their varying sources of inspiration, the narrative techniques they evolve, and the basic genres they establish. (6 credits)

ENGLISH L424
Nature and Art in Renaissance Literature
Should the artist represent nature or transform it? Texts from literature and criticism written before 1700. (6 credits)

ENGLISH L425
Art and Ideas in the Early Seventeenth Century
A study of the poetry and some prose of the period, with special emphasis on the work of John Donne. (3 credits)

ENGLISH L426
Seventeenth Century Poetry
The course will put major emphasis on the poetry of Milton. Other poets to be studied will be selected from among Jonson, Donne, Herbert, Herrick and Marvell. (6 credits)

ENGLISH L427
Milton
Study of Milton's development as an artist and thinker from his school years through his involvement in the English Civil War to his final achievement in the epic genre. Readings will include the shorter poems, selected prose, *Paradise Lost* and *Samson Agonistes*. (3 credits)

ENGLISH L429
Restoration Drama
A study of plays by Etherege, Wycherley, Congreve, Dryden, Vanbrugh, Farquhar and others, intended to serve as an introduction both to this phase of English drama and to some of the major ideas and preoccupations of Restoration and eighteenth-century literature. (3 credits)

ENGLISH L433
The Restoration and Eighteenth Century I
Major authors of the eighteenth century, to include Dryden, Swift and Pope. (3 credits)

ENGLISH L434
Literature of the Eighteenth Century
A study of the aesthetic principles underlying the eighteenth century view of art. Numerous cross references are made to the painting of the period. Readings will be drawn from Dryden, Pope, Swift, Johnson, Boswell, Reynolds, The Letters of Gainsborough. (6 credits)

ENGLISH L435
The Restoration and Eighteenth Century II
Prerequisite: English L433 or in consultation with the professor. Major authors of the eighteenth century, to include Johnson, Richardson and Fielding. (3 credits)

ENGLISH L437
The Romantic Period I
The course will survey the major poets of the Romantic period (Blake, Wordsworth, Coleridge) with historical background and emphasis on the common technical and thematic elements of Romantic poetry. (3 credits)

ENGLISH L438
The Romantics
Major authors of the Romantic period, to include Blake, Wordsworth, Coleridge, Byron, Keats and the Shelleys. (6 credits)

ENGLISH L439
The Romantic Period II
Same as English L437, treating Byron, Shelley and Keats. (3 credits)

ENGLISH L441
Victorian Literature I
A study of Victorian prose works concerned with the role of the individual in society, beginning with two major social novels, *Middlemarch* and *Vanity Fair*. (3 credits)

ENGLISH L442
Victorian Literature
The poetry of Tennyson, Browning, Arnold, Hopkins, the Pre-Raphaelite circle; and novels from the following: Dickens, Eliot, Hardy (one novel by each author). (6 credits)

ENGLISH L443
Victorian Literature II
Complementary to English L441, but also suitable as an independent half course. A study of Victorian poetry and novels concerned with the individual consciousness, beginning with Tennyson and Browning. (3 credits)

ENGLISH L444
Literature and Aesthetics of the Nineteenth Century
A study of the various and changing views of the nineteenth century towards the nature and function of art. The course includes the study of the theoretical writings of DeQuincey, Ruskin, Swinburne, Whistler, Pater, Wilde, Bell and Fry, and a practical analysis of the major poetic works of Tennyson and Browning. (6 credits)

ENGLISH L446
Nineteenth Century Fiction
Emphasis will be on the variety of fictional modes and styles used during this period, and their relevance to the social and intellectual history of the age. (6 credits)

ENGLISH L450
Late Victorian and Edwardian Literature
The end of the Victorian era and the beginnings of modernism. Novelists including James, Forster, Gissing, and Woolf; Wilde, Beardsley and *The Yellow Book*. (6 credits)

ENGLISH L454
Anglo-Irish Literature
Emphasis on the major English language writers of Ireland; notably O'Casey, Synge, Lady Gregory, Joyce, Yeats and Beckett. (6 credits)

ENGLISH L472
Modernist Poetry and Poetics
A study of the major poetic figures of the period 1890-1930, with an emphasis on the relationship between poetry and the visual arts. The influence of impressionism, symbolism, surrealism, and cubism on the theories of poetry will be considered. Detailed study of Yeats, Eliot, Crane, Wallace Stevens, E. E. Cummings, the Imagists, etc. (6 credits)

ENGLISH L474
History of Criticism
A consideration of the major texts which have marked the development of literary criticism. The course will be both historical and methodological. (6 credits)

ENGLISH L475
Patterns of English Speech
The course will examine the relationship between spoken and written English from a variety of points of view: linguistic, semantic, philosophical, literary. The course will emphasize oral English and will include such topics as phonology, intonational patterns, dialect, slang. (3 credits)

ENGLISH L477
Advanced Stylistics
On the basis of the linguistic study in L475, L477 will examine sentence structures, paragraph formation, tone, diction, argumentation. (3 credits)

ENGLISH L479
Advanced Studies in English Literature
Prerequisite: A period course in the area involved. A course devoted to a special topic or particular author in English Literature. The topic or author will vary from year to year. (3 credits)

ENGLISH L481
Advanced Studies in Shakespeare
Prerequisite: English L418 or suitable introductory course. Intensive study of a selected topic in Shakespeare, the exact nature of the topic to vary from semester to semester. (3 credits)

ENGLISH L483
Advanced Studies in American Literature I
Prerequisite: English L346. The topics considered will vary from year to year, and may include American poetry, American short stories, American drama, nineteenth century American fiction, etc. (3 credits)

ENGLISH L485
Advanced Studies in American Literature II
Prerequisite: English L346. As in L483, the topic will vary annually. (3 credits)

ENGLISH L487
Advanced Studies in Canadian Literature I
Prerequisite: English L454. Topics from poetry — an intensive study of the background and development of the genre and critical material will be conducted. (3 credits)

ENGLISH L489
Advanced Studies in Canadian Literature II
Prerequisite: English L454. Topics from fiction — an intensive study of the background, development of the genre and critical materials will be conducted. (3 credits)

ENGLISH L490
Joint Tutorial in History and English
A tutorial for students in the English and History Joint Honours Programme. (6 credits)

ENGLISH L492
Joint Tutorial in Modern Languages and English

A tutorial for students in the English and Modern Languages Joint Honours Programme. (6 credits)

ENGLISH L494
Independent Studies

A tutorial programme arranged with a member of the department. (6 credits)

ENGLISH L496
Advanced Research and Thesis

A small number of seminars or tutorials on special themes and topics, to vary each year. Registration limited to Honours students in their final year. All students must consult with the Department in advance. (6 credits)

The following courses are university level courses which were offered in the year indicated but did not appear in the official Calendar.

1976 - 77
ENGLISH 308A/B
Studies in Drama
(3 credits)

ENGLISH 580B
Independent Studies
(3 credits)

51.11.3 English as a Second Language

Coordinator
O. de GROOT

ESL 100
English Language

A course for students whose first language is other than English and who require additional training in order to achieve a level of expression acceptable to the university. The focus of the course is primarily on the development and improvement of writing skills. All candidates will be tested prior to entry. (6 credits)

ESL 201
English Language and Composition

Prerequisite: Successful completion of ESL 100 or proven equivalent competence in English. This course is designed for non-English students who have completed secondary school or its equivalent in a language other than English. The course encourages the development of effective written communication and improved reading comprehension so that the student may perform competently in his other university work. (6 credits)

51.12 Département d'Etudes Françaises

Assistant Professor and Chairman
M. TIFFOU

Associate Professor and Chef de section (Literature)
D. LEVY

Assistant Professor and Chef de section (Language)
N. TRUCHON

Professors
G. LABBE
G. LAURION
A. LAUZIERE

Associate Professor
L. SUGDEN

Assistant Professors
M. CATRY-VERRON
G. CHARPENTIER
M.-F. LIGIER
O. RIGAULT
L. VAN TOCH

51.12.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1.

The superscript indicates credit value.

60 BA Honours in French Language

Year I

18 Fr L352[6], L428[6]; two of L259[3], L261[3], L263[3], L265[3], L267[3], L269[3]

Year II

18 Fr L448[6], L452[6], and either L241[3] and L243[3], or L245[3] and L247[3]

Year III

24 Fr L438[6], L462[6]; two of L439[3], L441[3], L443[3], L445[3], L447[3], L449[3]; and 6 Fr Elective credits

72 BA Joint Honours in French and English*

30 French: 6 credits in the XXth century; 6 credits in Quebec literature; 12 credits chosen from the XVIIth, XVIIIth and XIXth century; Fr L210[6] or L211[3] plus 3 credits in the missing century (XVIIth, XVIIIth, XIXth century).

30 English: 6 credits chosen among the following: L300[6], L302[6], L303[3], L304[6], L305[3], L307[3], L309[3]. 18 credits chosen by genre or by periods paralleling the choice in French courses; 6 Elective credits chosen from the list of Honours and Major courses.

12 Credits will be chosen as follows: either 6 credits in each of two departments, or a corresponding combination of "Independent Studies" carried out in each of the two departments.

**NOTE: Sequence of courses to be determined in consultation with the departments concerned.*

60 BA Honours in French Literature

Year I

18 Fr L210[6] or L211[3], 6 or 9 credits* chosen from L241[3] and L243[3], L245[3], L247[3], L321[3], L323[3], L325[3]**; 3 credits chosen from: L259[3] or L261[3] or L396# and 3 credits from: L263[3], L265[3], L267[3], or L269[3]

Year II

24 6 credits chosen from: L321[3], L323[3] or L325[3], L241[3], L243[3], or (L245[3] and L247[3]);
6 credits: L351[3], and L353[3] or L355[3]
6 credits: L428[6]
6 credits: L430[6], or L431[3] and L433[3]***

Year III

18 Fr L430[6], or L431[3] and L433[3]; L439[3] or L441[3] plus 3 credits chosen from L443[3], L445[3], L447[3], L449[3]; 6 credits chosen from Honours and Major courses e.g., L475[3], L477[3], etc.

**NOTE: Students allowed to take L211 must make up another 3 credits in literature*
***6 credits in French Canadian Literature are required as are 6 credits in the XVIIth Century though they may be taken either in 1st or 2nd year.*
#Fr L396 counts for 3 credits in Quebec Literature and the other 3 credits count as electives (see note on Literature § 51.13.2).
****Because these two courses are given alternately, Honours students must take one of them in their second year (see note on alternation of courses § 51.12.2).*

72 BA Joint Honours in French and History

30 French credits:
6 Fr L210[6]
6 Fr L351[3] and L353[3] or L355[3]
6 Fr L241[3] and L243[3], or L245[3] and L247[3]
6 Fr L439[3] and L445[3] or L447[3], or L441[3] and L445[3] or L447[3]

6 Fr L259[3] and L269[3], or L261[3] and L267[3] or L269[3], L396* and L267[3] or L269[3]
30 History credits:
Hist L206[6], L250[6], L266[6], and two Honours Seminars chosen from: L450[6], L452[6], L454[6]
6 Elective credits in French or History
6 Hist L492[6] or Fr L498[6]

**NOTE: Fr L396 counts for 3 credits in Quebec Literature, and the other 3 credits count as electives (See note on Literature § 51.12.2).*

60 BA Specialization in French Literature

The same series of courses as for the Honours programme without a specified grade requirement (See note on Literature § 51.12.2).

42 BA Major in French Language (1er degré)*

Year I
12 Fr L303[6] and L305[6], or Fr L306[6] and one of the following:
Fr (L307[3], L308[3]), (L309[3], L311[3]), (L313[3], L314[3]), (L315[3], L316[3]), (L317[3], L318[3]), (L319[3], L320[3])
Year II
12 Fr L322[6] and L324[6]
Year III
18 Fr L336[6], L338[6], L352[6], or two of these and a 6-credit course selected among the other advanced courses of the Department (Language or Literature)

**NOTE: A group of 42 credits for students starting at the intermediate level.*

42 BA Major in French Language (2e degré)

Year I
12 Fr L322[6] and L324[6]
Year II
18 Three of: Fr L336[6], L338[6], L352[6], L428[6]
Year III
12 Two of: Fr L438[6], L448[6], L452[6], L462[6], a 6-credit course selected among the other advanced courses of the Department.

NOTE: The student must choose his/her courses in consultation with the Department.

72 BA Joint Honours in French and one of the Modern Languages*

36 French: 6 credits in the XXth century. 6 credits in Quebec literature; 12 credits chosen from the XVIIth, XVIIIth, and XIXth century; L210[6] or L211[3] plus 3 credits in the missing century (XVIIth, XVIIIth, XIXth century); 6 Elective credits chosen from the list of French Honours and Major courses or a full tutorial.
36 Modern Languages: These 36 credits are to be chosen in German, Italian or Spanish in consultation with the Chairman of Modern Languages and Linguistics. Literature courses will be chosen to parallel as much as possible the choice in French courses.

**NOTE: Sequence of courses to be determined in consultation with the departments concerned.*

BA French Honours and Major Students entering in January

Year I — Winter Term
12 Chosen from Fr L243[3], L247[3], L261[3], L265[3], L323[3]
Year I and II — Fall Term and Winter Term
Fr L210[6], or L211[3] plus another 3 credits in Quebec literature

NOTE: Refer to the programme of Honours and Major in literature for the remaining courses in the programme.

42 BA Major in French Literature

Year I
18 Fr L210[6] or L211[3];* two or three of: L241[3], L243[3], L245[3], L247[3], L321[3], L323[3] or L325[3];** L259[3] or L261[3] or L396** and L263[3], L265[3], L267[3] or L269[3]
Year II
12 Two of: Fr L321[3], L323[3] or L325[3], L241[3], L243[3], L245[3], L247[3]; L351[3] and L353[3] or L355[3]
Year III
12 Fr L439[3] or L441[3], and L443[3] or L445[3] or L447[3] or L449[3]; L471[3] or L475[3], and L473[3] or L477[3]

**NOTE: Students allowed to take L211 must make up another 3 credits in literature.*
***two half courses in Fr Canadian Literature are required as are 6 credits in the XVIIth century though they may be taken in either 1st or 2nd year. Fr L396 counts for 3 credits in Quebec Literature and the other 3 credits count as electives. (See note on Literature, § 51.12.2).*

24 Minor in French Literature

Year I
6 Fr L210[6], or L211[3] plus three credits in XVIIth, XVIIIth or XIXth Centry
Year II
6 Fr L428[6]
6 From courses in the XVIIth, XVIIIth or XIXth century
Year III
6 From courses in the XXth century

24 Minor in French Language

A sequence of 24 credits in French Language starting at the intermediate level or higher and determined in consultation with the Department after a placement interview.

30 Certificate in French Language (1er degré)

Year I
12 Fr L201[6], L202[6]
Year II
12 Fr L303[6] and L305[6]; or L306[6] and one of the following: Fr L307[3] and L308[3]; L309[3] and L311[3]; L313[3] and L314[3]; L315[3] and L316[3]; L317[3] and L318[3]; L319[3] and L320[3]
Year III
6 Fr L322[6] or L324[6]

NOTE: A group of 30 credits over three years of study for students starting at the elementary level who wish to become functionally bilingual.

30 Certificate in French Language (2e degré)

Students who complete 30 credits in advanced courses as indicated under YEAR II and YEAR III of the Major in French Language — 1er degré — can be given a Certificate in French Language, 2e degré.
NOTE: The courses can be spread over two or three years of study, in consultation with the Department.

51.12.2 DEPARTEMENT D'ETUDES FRANCAISES

Alterations may be made in the programmes, from year to year, but the whole three-year programme of a given student remains the one appearing in the calendar of the year of his registration in French, unless otherwise authorized by the Department.

Students wishing to combine programmes in French and another discipline should consult with the chairmen (or chef de section in French) and have the registration approved by both of them.

Besides the Honours, Major, Joint Honours and Minor programmes indicated, a double Major or Honours with Major is always possible between French and another subject (42 credits in French, 42 credits in another discipline and 6 elective credits constitute a double Major). For example, French and Library Science would be an excellent combination.

A higher number for a course does not generally reflect a higher degree of difficulty in that course.

Students seeking admission to the Honours programme on or after June 1st, 1977 will be bound by the Honours requirements outlined in § 16.2.4 of this Calendar. Students who already had Honours status by June 1st, 1977 will continue to be governed by the requirements which applied at the date of their admission to the Honours programme.

Students Honouring or Majoring in French, or in French and another discipline, will have a faculty adviser with whom they will consult.

Literature:

Apart from the 54 credits normally prescribed for the Honours degree, students must as well complete a further 6 credits chosen from among those indicated for the Honours or Major programme (e.g., L475, L477).

Honours students are also to be examined on two extra readings for each course of their programme.

L396 may count for 3 Honours or Major credits in French and 3 credits as an elective.

Students may also obtain a Specialization by completing the 60 credits normally prescribed for the Honours programme while the grade requirements specific to the Honours programme are waived.

Certain courses may alternate on a yearly basis: Moyen âge with Renaissance, French and Quebec civilizations and trends of thought, half courses in Quebec and comparative literature and in the XVIIth and XVIIIth centuries.

A student who is neither Majoring nor Honouring in French and whose written or spoken knowledge of the French language is inadequate by high standards, but sufficient for him or her to follow the course and take part in discussions, may register for a literature course and receive permission to write his assignments and examination in ENGLISH. His transcript will then bear "In English" after the course number. Should the student later on decide to Major or Honour in French, such a course will neither count as a French requirement nor as an elective if it has to be retaken.

Language:

The BA Major in French Language allows English-speaking students to acquire mastery of the language and to specialize in particular areas. It can be combined with a Major in another discipline, adding proficiency in French to the students' career qualifications. All courses in the Language section are open to all students for elective academic credits provided they enroll at their proper level. In order to ensure this, registrations must be approved by the Department, and A PLACEMENT INTERVIEW IS COMPULSORY BEFORE REGISTRATION IN ANY FRENCH LANGUAGE COURSE OR PROGRAMME.

51.12.3 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.5

SECTION LANGUE

FRENCH L200
Basic French

An introductory course restricted to students with no previous knowledge of French. Practical oral exercises in class and assigned practice in the laboratory. (6 credits) *NOTE A/See § 200.5*

FRENCH L201
Elementary I

Oral course for students who have had some basic training. Practical exercises in class and some assigned practice in the laboratory. (6 credits) *NOTE A/See § 200.5*

FRENCH L202
Elementary II

For students who have had about two years of training. Practical oral exercises in class and assigned work in the laboratory. Students will gradually make the transition from imitation of models to free expression. (6 credits) *NOTE A/See § 200.5*

FRENCH L303
L'art de vivre au Québec I

An intensive oral course which aims at increasing the students' fluency in French through discussions with French-speaking student peers, under the guidance of a faculty member. The techniques used include small

group interaction, contacts with Québec milieu and intensive practice. Students will participate in the guided choice of subjects which will cover areas of common interest and concern. Regular participation is mandatory. Six hours a week for one term, first or second term. (6 credits)

FRENCH L304
Intermediate I

A conversational approach to everyday modern French through active student participation. A review of grammar and syntax through oral exercises. Three hours a week plus language lab for two terms. (6 credits)

FRENCH L305
L'art de vivre au Québec II

Same as L303, but at a higher proficiency level. The two courses may be taken separately or consecutively. (6 credits)

FRENCH L306
Intermediate II

Systematic study of vocabulary and review of structure. Accent will be on correct form, both spoken and written. (6 credits)

FRENCH L307
French for Community Health Services I

For students interested in or intending to work in community health services. The practice of the usual French language skills will be centered around situations such as the student may encounter in working in a day care centre, health counselling clinic, hospital, etc. In addition to acquiring a common core of basic medical vocabulary and reviewing oral structures appropriate to the situation, each student will be asked to work on an individual project covering his own area of interest. (3 credits)

FRENCH L308
French for Community Health Services II

Continuation of L307, which is not, however, a prerequisite. New subtopics are added and vocabulary is further enriched in the second semester. (3 credits)

FRENCH L309
French used in Physical Education and Sports

For students interested in the area of physical fitness. Subjects studied will include the following: Parts and movements of the body — physical conditioning — the role of physical education and sports in society — The Olympic Games — hockey — sports reporting — leadership in sports. The study of each subject will include vocabulary acquisition, the review of appropriate oral structures, guided discussion and individual projects. (3 credits)

FRENCH L311
French for Recreology

For students interested in the creative use of leisure for themselves and others. Subjects studied will include: Leisure in the modern society — popular leisure pursuits in Québec — leisure and the city — leisure in the open air — the organization of leisure services in Montreal — holiday camps and their activities — roles and training of camp counsellors. Study will include vocabulary acquisition, review of appropriate structures, guided discussion and individual projects. (3 credits)

FRENCH L313
French for Social Sciences I

Primarily for students in political science, sociology and allied fields who wish to participate in French in the community and public life of Québec. The themes and vocabulary studied will cover various political, government and labour organizations and basic legal terminology, with emphasis on actual situations of communication. Readings, guided discussion and individual projects related to the students' particular fields of interest. (3 credits)

FRENCH L314
French for Social Sciences II

Continuation of L313, which is not, however, a prerequisite. New sub-topics are added and vocabulary is further enriched in the second semester. (3 credits)

FRENCH L315
French for Industry I

Primarily for science and engineering students who will use French as the language of communication on the job. The common vocabulary core will cover the organization of an industrial plant and the basic terms relating to the manufacturing process and labour relations. In addition, each student will undertake an individual project covering his own area of interest. (3 credits)

FRENCH L316
French for Industry II

Continuation of L315, which is not, however, a prerequisite. New sub-topics are added and vocabulary is further enriched in the second semester. (3 credits)

FRENCH L317
French for Library Studies I

The course will emphasize the vocabulary and structures needed for communicating with users of library and resource centre services, and for exchanging information with personnel of French libraries, resource centres and similar agencies. Terms related to the organization of a library, the processes, materials and equipment used and the services provided will be studied. In addition, each student will work on an individual project. (3 credits)

FRENCH L318
French for Library Studies II

Continuation of L317, which is not, however, a prerequisite. New sub-topics are added and vocabulary is further enriched in the second semester. (3 credits)

FRENCH L319
French for Commerce I

Primarily for Commerce students who wish to acquire a working knowledge of business French, both oral and written. Terms relating to trade, banking and various business transactions will be studied, as well as business correspondence, with emphasis on actual situations of communication. Students will be encouraged to undertake individual projects. (3 credits) *NOTE A/See § 200.5*

FRENCH L320
French for Commerce II

Continuation of L319, which is not, however, a prerequisite. New sub-topics are added and vocabulary is further enriched in the second semester. (3 credits) *NOTE A/See § 200.5*

FRENCH L322
Français oral avancé

Ce cours s'adresse à l'étudiant qui, ayant terminé le niveau intermédiaire, a besoin de perfectionner sa langue orale. On approfondira la connaissance des structures et du lexique au moyen d'exercices systématiques et d'activités telles que débats, exposés oraux, enquêtes,

comptes rendus, etc. A la fin de ce cours, l'étudiant devrait parler avec une bonne maîtrise de la langue française. (6 crédits)

FRENCH L324
Problèmes fondamentaux de l'écrit pratique
Ce cours exige une bonne connaissance du français oral. L'étudiant apprendra à éviter les erreurs de structure et à rédiger une lettre, un rapport ou une composition. L'accent sera mis sur le perfectionnement de la langue écrite. (6 crédits)

FRENCH L331
L'art de parler en public I
Correction phonétique, en particulier au niveau de la langue "soignée", techniques de présentation de la parole en public: pose de voix, gestes, affectivité, etc. Etude du vocabulaire et des procédures nécessaires pour convoquer une réunion, la diriger, y participer. Rédaction et présentation de divers types de rapports, allocutions et conférences. (3 crédits)

FRENCH L332
L'Art de parler en public II
Suite du cours L331, qui n'est pas, cependant un prérequis. (3 crédits)

FRENCH L333
Initiation à la terminologie du droit I
Ce cours de langue avancé s'adresse aux étudiants anglophones qui ont déjà une bonne connaissance du français courant. L'étudiant se familiarisera avec le vocabulaire de l'appareil judiciaire au Québec en suivant les tribulations d'un personnage confronté à divers problèmes juridiques dans des situations telles que: conflit locataire-propriétaire, problème d'assurance, contrat de mariage, etc. Il apprendra également la terminologie de base des différentes branches du droit. (3 crédits)

FRENCH L334
Initiation à la terminologie du droit II
Suite du cours L333, qui est un prérequis. L'étudiant approfondira sa connaissance du vocabulaire juridique par une étude théorique et pratique de divers litiges. (3 crédits)

FRENCH L336
Cours avancé de langue et civilisation
Examen des principales difficultés morphologiques et syntaxiques de la langue française. Etudes des réalités de la vie québécoise. (6 crédits)

FRENCH L338
Cours avancé de la langue des affaires
Examen des principales difficultés de la langue française à partir d'une documentation axée sur le monde des affaires. Etude approfondie du vocabulaire de la gestion, rédaction de lettres et rapports, traduction de textes commerciaux. Le cours vise à faciliter une communication efficace écrite et orale dans le domaine des affaires. (6 crédits)

FRENCH L352
Ressources stylistiques du français
Ce cours vise deux objectifs principaux: l'amélioration du style écrit et parlé des étudiants, la prise de conscience des ressources stylistiques du français et l'étude des expressions idiomatiques. (6 crédits) *NOTE A/See § 200.5*

FRENCH L428
Histoire de la langue et linguistique
Introduction à la linguistique descriptive et historique. Application au français; description du français moderne et histoire de la langue française. Cours obligatoire pour les étudiants "Honours" et "Specialization", et fortement recommandé aux "Majors". (6 crédits)

FRENCH L438
Principes de la linguistique appliquée
Initiation aux principes de la linguistique appliquée à l'enseignement du français langue seconde. Elaboration d'exercices à l'intention des élèves à des niveaux variés d'âge et de connaissances. Au deuxième semestre, examen et évaluation de divers ensembles pédagogiques dont on se sert à présent pour l'enseignement du français langue seconde, et élaboration en équipe d'une leçon complète. (6 crédits)

FRENCH L448
Pédagogie de l'audio-visuel
Le cours s'adresse aux étudiants qui s'intéressent à l'usage des média dans l'enseignement. Au premier semestre, on étudiera les nouveaux rôles de l'enseignant face aux changements technologiques dans la société et à l'évolution des moyens de communication.
Le deuxième semestre sera consacré à l'étude pratique des techniques de présentation et de réalisation de documents audio-visuels à fins éducatives. Travaux pratiques aboutissant à l'élaboration en équipe, d'un document audio-visuel destiné à l'enseignement du français langue seconde. (6 crédits) *NOTE A/See § 200.5*

FRENCH L452
Stylistique et traduction
Stylistique interne du français: examen pratique de procédés grammaticaux, de problèmes de stylistique et de difficultés particulières à la langue française. Introduction à la stylistique comparée de l'anglais et du français: exercices de stylistique comparée, traduction; anglicismes, faux amis; expressions idiomatiques. (6 crédits)

SECTION LITTERATURE

Les étudiants qui ne sont pas inscrits en *Major* ou en *Honours French* peuvent suivre l'un ou l'autre des cours suivants après consultation avec le Département.

FRENCH L210
Introduction aux études littéraires
Prérequis: un à deux cours de français d'un bon niveau au CEGEP. Méthodologie. Technique de la composition, de l'explication de texte et de la dissertation. Grammaire structurale. Initiation aux principaux genres littéraires. Ce cours est éliminatoire. (6 crédits)

FRENCH L211
Introduction aux études supérieures
Prérequis: trois cours de français d'un bon niveau au CEGEP. Technique de l'explication de texte et de la dissertation. Méthodologie de la recherche. Révision des principales difficultés grammaticales. Initiation aux grands genres littéraires. (3 crédits)

FRENCH L213
Quebec literature in translation I
A course designed for English speaking students who wish to gain insight into the thought processes, attitudes and way of life of Québec as revealed by some of the most striking works of prose and poetry in her literature. A choice of the following selections

which have become classics in this field: Ringuet, *Thirty Acres;* R. Lemelin, *The Town Below;* G. Roy, *The Tin Flute;* G. Bessette, *Not for Every Eye;* Y. Thériault, *Agaguk;* G. Tougas, *History of French Canadian Literature.* (3 credits)
NOTE: This course is taught in English.

FRENCH L215
Quebec literature in translation II

Chronologically, a continuation of L213, concerned more particularly with literary creations which are more recent. A choice from the following list depending upon availability of texts and interests of the group: M. C. Blais, *A Season in the life of Emmanuel;* C. Jasmin, *Ethel and the Terrorist;* Anne Hébert, *Kamouraska;* G. Gélinas, *Yesterday the Children Were Dancing;* R. Carrier, *La Guerre, Yes Sir!* G. Tougas, *History of French Canadian Literature.* (3 credits)
NOTE: This course is taught in English.

FRENCH L241
Littérature du XIXe siècle (1800-1850) I

La génération romantique: l'inquiétude, le rêve et l'énergie. Leçons, séances de travaux pratiques et travaux de recherche. Le roman: Chateaubriand, *René;* Constant, *Adolphe;* Vigny, *Cinq-Mars;* Balzac, *Le Père Goriot;* Stendhal, *Le rouge et le noir;* Lagarde et Michard *XIXe siècle.* (3 crédits)

FRENCH L243
Littérature du XIXe siècle (1800-1850) II

La génération romantique: l'évasion, le risque et la recherche. Leçons, séances de travaux pratiques et travaux de recherche. La poésie: Lamartine, *Les méditations;* Vigny, *Les destinées;* Hugo, *Les contemplations.* Le théâtre: Hugo, *Ruy Blas;* Musset, *Lorenzaccio;* Vigny, *Chatterton;* Lagarde et Michard, *XIXe siècle.* (sp. Musset, Nerval et Gautier). (3 crédits)

FRENCH L245
Littérature du XIXe siècle (1850-1900) III

Le monde bourgeois et anti-bourgeois: les courants réaliste, naturaliste et fin de siècle. Leçons, séances de travaux pratiques et travaux de recherche. Le roman: Flaubert, *Madame Bovary;* Fromentin, Dominique; D'Aurevilly, *L'ensorcelée;* Zola, *Germinal;* Huysmans, *A Rebours;* Lagarde et Michard, *XIXe siècle.* (3 crédits)

FRENCH L247
Littérature du XIXe xiècle (1850-1900) IV

Le monde bourgeois et anti-bourgeois: les courants parnassien et symboliste. Leçons, séances de travaux pratiques et travaux de recherche. La poésie: Baudelaire, *Les fleurs du mal;* Verlaine, *Romances sans paroles;* Rimbaud, *Une saison en enfer;* Mallarmé, *Hérodiade* et *L'après-midi d'un faune;* Lagarde et Michard, *XIXe siècle.* (3 credits)

FRENCH L259
Littérature québécoise: Le roman I

Monde rural et monde urbain. Origines, influences, évolution. Etude d'oeuvres modernes. Leçons, séances de travaux pratiques et travaux de recherche. Textes: Ringuet, *Trente arpents;* Guèvremont, *Le survenant;* Savard, *Menaud maître-draveur;* Lemelin, *Au pied de la pente douce;* Roy, *Bonheur d'occasion.* (3 crédits)

FRENCH L261
Littérature québécoise: Le roman II

Le monde de l'individu. Leçons, séances de travaux pratiques et travaux de recherche. Textes: Langevin, *Poussière sur la ville;* Thériault, *Agaguk;* Bessette, *Le libraire;* Ducharme, *L'avalée des avalés;* Aquin, *Prochain épisode;* Blais, *Une saison dans la vie d'Emmanuel;* Ferron, *L'amélanchier.* (3 crédits)

FRENCH L263
Poésie, théâtre et conte français du Québec; Le patriotisme littéraire

Origines. Influences. Evolution, Tradition et renouveau. L'Ecole patriotique de Québec. Le régionalisme idéaliste et conservateur. La campagne et la ville: plénitude rurale, solitude urbaine. L'Ecole littéraire de Montréal. La dissidence individualiste et universaliste. Le populisme. Leçons, travaux pratiques, recherche, création. Textes: Choix de poèmes: de Fréchette et A. Garneau à Savard; Nelligan, *Poèmes choisis;* Morin, *Classiques canadiens;* DesRochers, *A l'ombre de l'Orford;* Savard, *L'Abatis;* Histoire de notre littérature dramatique; Choix d'extraits de théâtre: de Quesnel à L. de Montigny; Eloi de Grandmont, *Un Fils à tuer;* Dubé, *Un Simple Soldat;* Choix de contes littéraires: de Casgrain et Lemay à Grandbois et Thériault; Sylvestre, *Anthologie de la poésie canadienne-française;* P. de Grandpré, *Histoire de la littérature française du Québec, 1, 11.* (3 crédits)

FRENCH L265
Poésie, théâtre et conte français du Québec; Voix de l'homme et du monde

Maturation et orientations nouvelles. L'entrée dans le XXe siècle: continuité et contrastes. Ebauche de l'unanimisme, du futurisme et du surréalisme. Courants naturaliste et spiritualiste. Leçons, travaux pratiques, recherche, création. Textes: Choix de poèmes: de Chopin et Dugas à Hertel et Lasnier; J. A. Loranger, *Les Atmosphères, Poèmes;* R. Choquette, *Metropolitan Museum* (Classiques canadiens); Histoire de notre littérature dramatique; Choix d'extraits de théâtre; de Houlé à Toupin; Filiatrault, *Le Roi David;* Lasnier, *Le Jeu de la voyagère;* Toupin, *Brutus;* Choix de contes: de Laberge à Hébert, Martin, Ferron; Sylvestre, *Anthologie de la poésie canadienne-française;* P. de Grandpré, *Histoire de la littérature française du Québec,* 1, 11; thériault, *Conteurs canadiens-français.* (3 crédits)

FRENCH L267
Poésie et théâtre français du Québec; L'interrogation spirituelle et charnelle

Un âge critique. Quête de l'homme: angoisse, appels, révolte. La condition humaine. Appartenance terrestre. Recours au pays. Leçons, travaux pratiques, recherche, création. Textes: Saint-Denys Garneau, Grandbois, Classiques canadiens; Choix de poèmes: S. Garneau, Hébert, Hénault, Gauvreau, P. -M. Lapointe, Chamberland; Languirand, *Les Grands Départs;* Hébert, *Le Temps sauvage;* Laurendeau, *La Vertu des chattes;* Choix d'extraits dramatiques: Lamarche, Gélinas, Gauvreau, Lomer Gouin, Thériault; Sylvestre, *Anthologie de la poésie canadienne-française;* P. de Grandpré, *Histoire de la littérature française du Québec,* 1, 11; Godin-Mailhot, *Le Théâtre québécois.* (3 crédits)

FRENCH L269
Poésie et théâtre français du Québec; Voix du pays réinventé

L'inconscient et la condition de l'homme d'ici. Aliénation, refus, impuissance, échec. Misérabilisme. L'avenir national. Prophétisme révolutionnaire. Le pays assumé et dépassé. Engagement et gratuité. Leçons, travaux pratiques, recherche, création. Textes: Miron, *L'Homme rapaillé;* G. Lapointe, *Ode au Saint-Laurent;* Choix de poèmes: Giguère, G. Tremblay, Ouellette, G. Langevin, Péloquin, Duguay; la chanson poétique; Perreault, *Au Coeur de la rose;* F. Loranger, *Une Maison . . . un jour;* M. Tremblay, *A toi pour toujours, ta Marie-Lou;* Choix d'extraits dramatiques: Ferron, Ducharme, Carrier, Gurik, M. Garneau, R. Lepage . . . Bosquet, *Poésie du Québec;* P. de Grandpré, *Histoire de la littérature française du Québec,* 1, 11; Godin-Mailhot, *Le Théâtre québécois.* (3 crédits)

FRENCH L321
Littérature du XVIIe siècle: le théâtre et la dramaturgie classiques

Etude du théâtre classique dans le théâtre de Corneille, de Racine et de Molière. Leçons, séances de travaux pratiques et travaux de recherche. Textes: *Polyeucite; Britannicus; Tartuffe;* Lagarde et Michard, *XVIIe siècle.* (3 crédits)

FRENCH L323
Littérature du XVIIe siècle: les moralistes, les penseurs et les orateurs

Leçons, séances de travaux pratiques et travaux de recherche. Textes: Descartes, *Discours de la Méthode;* Pascal, *Pensées;* La Rochefoucauld, *Maximes;* Bossuet, *Oraisons funèbres* et *Sermons;* La Bruyère, *Caractères;* Lagarde et Michard, *XVIIe siècle.* (3 crédits)

FRENCH L325
Littérature du XVIIe siècle: la fable, le roman, la littérature épistolaire, les mémoires

Leçons, séances de travaux pratiques et travaux de recherche. Textes: La Fontaine, *Fables;* Mme de La Fayette, *La Princesse de Clèves;* Mme de Sévigné, *Lettres;* Retz, *Mémoires;* Saint-Simon, *Mémoires;* Lagarde et Michard, *XVIIe siècle.* (3 crédits)

FRENCH L351
Littérature du XVIIIe siècle: l'esprit philosophique en France au siècle des lumières

Montesquieu, *Lettres persanes;* Voltaire, *Lettres philosophiques; L'encyclopédie;* Rousseau, *Contrat social;* Lagarde et Michard, *XVIIIe siècle.* (3 crédits)

FRENCH L353
Littérature du XVIIIe siècle: le roman et le conte

Prévost, *Manon Lescaut;* Lesage, *Gil Blas;* Diderot, *Le neveu de Rameau;* Voltaire, *Candide;* Rousseau, *La Nouvelle Héloïse;* Bernardin de Saint-Pierre, *Paul et Virginie;* Lagarde et Michard, *XVIIIe siècle.* (3 crédits)

FRENCH L355
Littérature du XVIIIe siècle: le théâtre et la poésie

Lesage, *Turcaret;* Marivaux, *Le jeu de l'amour et du hasard, Les fausses confidences;* Sedaine, *Le philosophe sans le savoir;* Beaumarchais, *Le mariage de Figaro;* Chénier, *Poésies;* Lagarde et Michard, *XVIIIe siècle.* (3 crédits)

FRENCH L396
(Also given as Int St L224)
Littérature comparée—Comparative literature. Littératures canadiennes—Canadian Literatures

L'étude comparée des littératures canadiennes d'expression française et d'expression anglaise. Existe-t-il une seule littérature canadienne dans les deux langues, ou, en réalité, y a-t-il deux littératures séparées au Canada? Comparative study of French and English Canadian Literature. Is there only one literature in two languages or has Canada produced two distinct and separate literatures? Textes — Texts: Grove, *Settlers of the Marsh;* Ringuet, *Trente arpents;* MacLennan, *The Watch that Ends the Night;* Langevin, *Poussière sur la ville;* Laurence, *Rachel, Rachel;* Davies, *Fifth business;* Carrier, *La guerre, Yes Sir!;* Ross, *As for me and my house;* M. C. Blais, *Une Saison dans la vie d'Emmanuel;* Hébert, *Kamouraska.* (6 crédits)

FRENCH L430
Littérature du moyen âge

Initiation à la langue et à la littérature du moyen âge. Choix d'oeuvres épiques, romanesques, lyriques et historiques. Textes: *La chanson de Roland; Tristan et Iseut;* Chrétien de Troyes; *Yvain; La chastelaine de Vergi;* Guillaume de Lorris, *Le roman de la rose;* Villehardouin, *La conqueste de Constantinople;* Villon, *Poésies;* Lagarde et Michard, *Le moyen âge.* Leçons et séances de travaux pratiques. (6 crédits)

FRENCH L431
Littérature du XVIe siècle I: La prose: essai, nouvelle, roman, satire

Origines. Influences. Continuité. Rupture et liberté. Renaissance et réformisme. Nouvel humanisme. Courants divers. Individualisme. De Rabelais à Montaigne et à François de Sales. Leçons, travaux pratiques, recherche. Textes: Humanistes du XVIe siècle; Rabelais, *Gargantua, Pantagruel;* Du Bellay, *Défense et illustration de la langue française;* Montaigne, *Essais;* Lagarde et Michard, *XVIe* siècle. (3 crédits)

FRENCH L433
Littérature du XVIe siècle II: La poésie: théâtre, lyrisme, satire et didactisme

Influences. La tradition médiévale dans la poésie (de Marot à Régnier) et dans le théatre. Culture nouvelle. Italianisme. Culte de l'antiquité. L'école lyonnaise, la Pléiade, la poésie engagée. Théoriciens littéraires. Naissance du théâtre classique. Leçons, travaux pratiques, recherche. Textes: Ronsard, *Les Amours;* Du Bellay, *Les Regrets;* R. Garnier, *Antigone, Les Juives;* Th. de Bèze, *Abraham sacrifiant;* A. d'Aubigné, *Les Tragiques;* Lagarde et Michard, *XVIe siècle.* (3 crédits)

FRENCH L439
Roman, théâtre et poésie du XXe siècle: La Belle Epoque

Néo-symbolisme, nationalisme, intuitionalisme, le roman psychologique et l'annonce du surréalisme. *Auteurs choisis parmi les suivants:* Jarry, Barrès, Proust, Apollinaire, Fournier, Valéry, Péguy, Claudel, Bourget. *Textes choisis par le professeur tels que: Du côté de chez Swann; Alcools; Partage de midi; Cinq grandes odes; La Jeune Parque; Le cimetière marin; Le Grand Meaulnes.* (3 crédits)

FRENCH L441
Roman, théâtre et poésie du XXe siècle: du Neo-Classicisme à la Littérature Engagée

Néo-classicisme, mysticisme, naturalisme, surrélisme et la littérature engagée. *Auteurs choisis parmi les suivants:* Gide, Mauriac, Bernanos, Colette, Giono, Pagnol, Bosco, Breton, Eluard, Aragon, Cendrars, Desnos. *Textes choisis par le professeur tels que: L'Immoraliste; La Symphonie pastorale; Thérèse Desqueyroux; Nadja; Regain ou Marius; Poèmes* d'Eluard et d'Aragon. (3 crédits)

FRENCH L443
Roman, théâtre et poésie du XXe siècle: Le Roman-Fleuve, Renouveau Théâtral et Poésie en Marge du Surréalisme

Auteurs choisis parmi les suivants: Romains, Rolland, Duhamel, Martin du Guard, Giraudoux, Cocteau, Superville, Jacob. *Textes choisis par le professeur tels que: Les Thibault; les Pasquiers; La Guerre de Troie n'aura pas lieu* ou *Electre; Les Copains* ou *Knock; La Machine infernale; poésie* de Cocteau, de Supervielle, de Jacob. (en veilleuse 1976-77) (3 crédits)

FRENCH L445
Roman, théâtre et poésie du XXe siècle: Prélude à la guerre

Littérature désabusée. Roman de la grandeur humaine et l'épopée intérieure. *Auteurs choisis parmi les suivants:* Céline, Montherlant, Malraux, Anouilh, Salacrou, Julien Green, St-Exupéry, Perse, Jouve. *Textes choisis par le professeur tels que: Voyage au bout de la nuit; La Reine morte; La Condition humaine; La Sauvage* ou *Antigone; Vol de Nuit; poèmes* de Perse, de Jouve. (3 crédits)

FRENCH L447
Roman, théâtre et poésie du XXe siècle: L'Epoque de l'Absurde et la Poésie Contemporaine

Analyse et illustration de la condition humaine. De la révolte au néant; Recherche d'une nouvelle voie évidente dans les oeuvres romanesques et le théâtre de l'absurde. *Auteurs choisis parmi les suivants:* Camus, Sartre, Beauvoir, Beckett, Aymé, Queneau, Ionesco, Genêt, Prévert, Ponge, Char, Michaux. *Textes choisis par le professeur tels que: Le mur; Huis clos; Le Malentendu; La Peste; En attendant Godot; Les Bonnes; poèmes* de Prévert, de Ponge, de René Char, de Michaux. (3 crédits)

FRENCH L449
Roman, théâtre et poésie du XXe siècle: Le Nouveau Roman et la Poésie Actuelle

Les tendances littéraires majeures depuis vingt ans. *Auteurs choisis parmi les suivants:* Bataille, Robbe-Grillet, Butor, Mallet-Joris, Diras, Sarraute, J. L. Curtis, Cesbron. *Textes choisis par le professeur tels que: Le Voyageur; La modification; Moderato cantabile; le planétarium; poèmes* choisis par le professeur. (en veilleuse 1976-77) (3 crédits)

FRENCH L451
Création littéraire et théâtrale

Ce cours, ou atelier d'écriture, s'adresse aux étudiants désireux d'écrire et de soumettre leurs textes à la critique et à l'analyse. Chaque semaine, un auteur lira ou fera lire son texte, se prêtant aux questions et aux commentaires de ses confrères et du professeur. Aperçus sur les problèmes d'eacriture dans les différents genres (poésie, conte, roman, essai, théâtre ou écriture pour la scène, la radio, la télévision, le cinéma), sur les lois ou les contraintes inhérentes à un genre choisi et sur les récentes recherches formelles dans ce domaine. Exercices d'écriture axés sur ces contraintes et ces recherches. (3 crédits)

FRENCH L452
Stylistique et Traduction

Stylistique interne du français: examen pratique de procédés grammaticaux, de problèmes de stylistique et de difficultés particulières à la langue française. Introduction à la stylistique comparée de l'anglais et du français: exercices de stylistique comparée, traduction; anglicismes, faux amis; expressions idiomatiques. (6 crédits)

FRENCH L453
(Also given as Production 303)
Art Dramatique

L'inscription est limitée. Ce cours, ou atelier pratique de théâtre, s'adresse aux étudiants qui veulent acquérir une connaissance pratique du théâtre, s'initier au phénomène de socialisation que cet art réalise. Ce "théâtre en action" vise à sensibiliser aux exigences du texte dramatique et aux réalités de la scène. Au cours de l'année, les membres de ce cours monteront et interpréteront une pièce ou quelques actes du théâtre français et/ou québécois, ou des scènes créées dans le cours. Etude pratique de quelques oeuvres susceptibles d'être représentées. Notions d'histoire du théâtre, de mise en scène, de formation du comédien, d'expression corporelle, de jeu scénique. Exercices de scénarisation de situations dramatiques, d'improvision dramatique et de diction théâtrale. (3 crédits)

FRENCH L462
Traduction avancée

L'art de la traduction. Stylistique comparée du français et de l'anglais. Traduction de textes littéraires de l'anglais au français. (6 crédits)

FRENCH L471
La civilisation française: ses rapports avec le Québec

Introduction à la civilisation française du moyen âge à nos jours. Le monde français: ses principales caractéristiques, unité et diversité. Aperçus sur l'histoire et la vie politique, économique, sociale et culturelle (religion, enseignement, beaux-arts, littérature . . .) de la France. — Présence de la France dans le monde, en particulier au Québec. Ce cours se propose surtout d'aider l'étudiant à situer la littérature française dans le contexte historique, politique, social et culturel qu'elle reflète. Leçons, travaux pratiques, recherches. — Textes: Guy Michaud, *Guide France;* Yves Trotignon, *La France au XXe siècle.* (3 crédits)

FRENCH L473
Essai et civilisation du Québec

La culture et la civilisation du Québec d'hier et d'aujourd'hui vues par ses principaux essayistes. Le monde québécois: origines, institutions, système de valeurs, évolution. Aspects marquants de l'histoire et de la vie politique, économique, sociale et culturelle (religion, enseignement, beaux-arts, littérature, langue, éloquence, journalisme . . .) du Québec. Leçons, travaux pratiques et travaux de recherche. Textes: Edmond de Nevers, *L'avenir du peuple canadien-francais;* Jean Le Moyne, *Convergences;* Lionel Groulx, *Les chemins de l'avenir;* Pierre Vadeboncoeur, *La ligne du risque;* Raoul Blanchard, *Le Canada français . . .* (3 crédits)

FRENCH L475
Histoire des idées en France au XXe siècle

Etude des principaux courants de pensée dans la France contemporaine: nationalisme, socialisme, intuitionisme, surréalisme, existentialisme, structuralisme. L'étude se fera à l'aide de textes d'essayistes et de penseurs, entre autres, Bergson, Barrès, Péguy, Breton, Camus, Sartre, Lévi-Strauss. Leçons, travaux pratiques. Textes recommandés: Bergson, *Les deux sources de la morale et de la religion;* A. Robinet, *Bergson;* Valéry, *Regards sur le monde actuel;* Breton, *Manifestes du surréalisme;* Sartre, *L'existentialisme est un humanisme?* Teilhard de Chardin, *Le phénomène humain;* Malraux, *Le tentation de l'Occident;* Camus, *L'homme révolté;* Lévi-Strauss, *Anthropologie structurale;* Gaétan Picon, *Panorama des idées contemporaines.* (3 crédits)

FRENCH L477
Histoire et mouvement des idées au Québec

Etude des principaux courants de pensée dans le Québec d'hier et d'aujourd'hui tels que l'ultramontanisme, le libéralisme, le nationalisme, le socialisme. Ce cours aidera l'étudiant à mieux situer la littérature française du Québec dans le contexte idéologique, politique, social et culturel qu'elle reflète. On étudiera, entre autres, les essayistes suivants: Edmond de Nevers, Jean Le Moyne, L. Groulx, P. Vadeboncoeur, F. Dumont, P. Vallières . . . Leçons, travaux pratiques. Textes suggérés: Edmond de Nevers, *L'avenir du peuple canadien-français;* Collection Classiques canadiens (Parent, Tardivel, F.-X. Garneau, Buies, Fournier . . .); Jean Le Moyne, *Convergences;* Lionel Groulx, *Les chemins de l'avenir;* F. Dumont, *Le lieu de l'homme;* Ernest Gagnon, *L'homme d'ici; Pierre Vadeboncoeur, La ligne du risque, Indépendances;* J.-P. Desbiens, *Les insolences du Frère Untel;* P. Vallières, *Nègres blancs d'Amérique;* F. Dumont, J.-P. Montigny, *Idéologies au Canada Français.* (1850-1900) (3 crédits)

FRENCH L480
Français avancé. Initiation à l'art littéraire

Etude des thèmes de la littérature du XXe siècle à travers des oeuvres et des textes choisis parmi les principaux genres. Travaux pratiques d'analyse, de rédaction et de grammaire. (6 crédits)

FRENCH L482
Initiation à la littérature

Connaissance des principaux genres littéraires et apprentissage des principales techniques de l'explication de texte. Etude approfondie de quelques oeuvres québécoises et française contemporaines. (6 crédits)

FRENCH L498
Programme libre ("Independent studies programme")

L'inscription à ce cours se fait après consultation avec le ou les professeurs devant surveiller la bonne marche des travaux et avec l'approbation du Département. (6 crédits)

The following courses are university level courses which were offered in the year indicated but which did not appear in the official Calendar.

1976
FRENCH SUMMER INSTITUTE
FRENCH 671Z, 673Z
Elementary Oral French
(6 credits each)

FRENCH 675Z, 677Z
Cours Intermédiaire
(6 credits each)

FRENCH 679Z, 681Z
Cours Intermédiaire
(6 credits each)

FRENCH 683Z, 685Z
Cours avancé I
(6 credits each)

FRENCH 687Z, 689Z
Cours avancé II
(6 credits each)

51.13 Geography

Associate Professor and Chairman
DAVID FROST

Lecturer and Coordinator of Geography at Loyola
RONALD DUFFY

Assistant Professor
MAXTON BARLOW

Lecturer
JACQUELINE ANDERSON

Part-time Instructors
ANNE HOWIE
JOAN MARSHALL

51.13.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1.

The superscript indicates credit value.

24 Minor in Geography

(a) For BSc Students:
Year I or II
9 Geog L265[3]; L275[3] and L276[3], or L375[6]
Year II or III
15 Geog Elective credits

(b) For BA Students:
Year I or II
9 Geog L200[6], L265[3]
Year II or III
15 Geog Elective credits

51.13.2 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.5.

GEOGRAPHY L200
Foundations of Geography: Environment and Man

Prerequisite: None. A course designed for the student with no previous training who is interested in the geographic background to world and environmental problems. A study will be made of both physical and human factors in geography. Areas of concentration will be: energy, natural systems and the environment; landscape evolution, climate and resources; variation and spatial distribution of man's economic, social and political activities; the relationship of urban and non-urban man to the environment. *Lectures:* 3 hours per week, including *Lab.* (6 credits)

GEOGRAPHY L215
Cultural Geography I: Man the Hunter

Prerequisite: None. A study of man-environmental relationships through the ages. The Pleistocene inheritance and the spread of man across the earth. Man the hunter. The development of cultures and the growth of agricultural landscapes. Man's differing adaptations in pre-industrial societies, including the Eskimos and Indians. *Lectures:* 3 hours per week. (3 credits)

GEOGRAPHY L216
Cultural Geography II: Man's Rise to Civilization

Prerequisite: None. The impact of technology upon cultures. The evolution of industrial man. The dichotomy between developed and developing countries. The population explosion and changing patterns of urban and non-urban societies. The future outlook. *Lectures:* 3 hours per week. (3 credits)

GEOGRAPHY L265
Maps and the Presentation of Statistical Data I

Prerequisite: None. This course is useful to anyone interested in how to read and analyze the information on a map; or in how to display data by means of maps and diagrams. It is basic to all other courses in Geography. Topics will include: analysis of topographic, land use, urban and weather maps; the application of maps to economic, social, medical and historical topics; the interpretation of aerial photographs. *Lab:* 3 hours per week. (3 credits)

GEOGRAPHY L266
Maps and the Presentation of Statistical Data II

Prerequisite: None. The emphasis in this part of the course will be on thematic maps and statistical diagrams and graphs. Elementary quantitative techniques will be studied and their application to the analysis of geographic, economic, population and other scientific and problem data. *Lab:* 3 hours per week. (3 credits)

GEOGRAPHY L275
Climate and the Biosphere

Prerequisite: None. A study of the energy systems of the atmosphere and an introduction to environmental geography. The hydrologic cycle, world climates and weather systems. Interrelationships in the biosphere, and man's impact upon them. Weather and climate maps will also be studied. *Lectures:* 3 hours per week, including *Lab.* (3 credits)

GEOGRAPHY L276
Landforms and the Biosphere

Prerequisite: None, L275 a help. An introduction to the energy systems of the earth's crust and oceans, and the processes which have shaped our environment. The evolution of land forms and man's impact upon landscapes. The Pleistocene and Recent epochs in Canada, and their effects on soils and land use. The study of relevant topographic land-use maps, and aerial photographs. *Lectures:* 3 hours per week, including *Lab.* (3 credits)

GEOGRAPHY L315
Political Geography

Prerequisite: Geog L216 or equivalent; or permission of department. Study of the political map and the spatial growth of states: of frontiers and boundaries, cities and federalism, systems and disintegration of empires. Votes, migrations and environmental stress. Spatial relationship at the municipal, national and international levels. Lectures: 3 hours per week. (3 credits)

GEOGRAPHY L317
Population Geography

Prerequisite: Geog L266 or equivalent. The characteristics, dynamics and distribution of world populations. Census data and techniques of census analysis. Rural/urban populations and their varying proportions. The vital processes of population change; natural increase and migration. Growth rates, population policies, and population pressure. Study of selected groups. The demographic prospects. *Lectures:* 3 hours per week. (3 credits)

GEOGRAPHY L325
Introduction to Historical Geography

Prerequisite: Geog L216 or equivalent. An examination of the geographical factors in historic events; of the distribution and migration of peoples; of differing settlement patterns and the growth of cities. The effect of physical boundaries in war and peace. The agricultural and industrial revolutions and their effects, and special reference to Europe. *Lectures:* 3 hours per week. (3 credits)

GEOGRAPHY L326
Historical Geography of North America

Prerequisite: Geog L216, L325 or equivalent. This course will be given with special reference to Canada. A study of early settlement and land use, and the effects of conflicts, treaties, and successive immigrations. The mercantile and colonial eras, and changing cultural and agricultural landscapes. Differing settlement patterns, including the seigneurial and township systems in Quebec. The growth of cities, industries and trade networks, and the emergence of Modern America. *Lectures:* 3 hours per week. (3 credits)

GEOGRAPHY L335
Urban Geography I

Prerequisite: Geog L200 or permission of department. The evolution of the city; its function and economic base. An examination of urban internal structure, land use, and social and political geography. *Lectures:* 3 hours per week. (3 credits)

GEOGRAPHY L336
Urban Geography II

Prerequisite: Geog L335 or permission of department. The North American and Canadian City. Problems and politics of urban growth and development. Contrasts with Old World and Third World Cities. *Lectures:* 3 hours per week. (3 credits)

GEOGRAPHY L342
The Geography of Canada

Prerequisite: Geog L200 or L216 or permission of department. The Indian, Eskimo and European settlement and early development of Canada. The resource base. Migration and changing land use. Emergence of cultural and economic regions. The growth of cities and of industrialization. Problems of a developed economy, with special reference to Quebec and Ontario. The demographic transition; federalism, nationalism and their consequences. The significance of development schemes in James Bay and the North. Canada's interaction with the U.S.A. and Latin America: her world position. *Lectures:* 3 hours per week. (6 credits)

GEOGRAPHY L344
The Third World

Prerequisite: Geog L200 or L216 or L358 or permission of department. The economic geography, problems and future of the developing countries. The importance of cultural traditions; the colonial legacy; the struggle for self-sufficiency. Agricultural and industrial resources, local and world trading patterns, tourism. Urbanization and increasing population pressure; outlook for 2000 A.D. *Lectures:* 3 hours per week. (6 credits)

GEOGRAPHY L347
The Developed Countries

Prerequisites: Geog L200, L216 or L358 or permission of department. An examination of the economic geography and contrasting organization of the EEC, the U.S.A. and the U.S.S.R. Problems of urban and industrial growth and decay, population trends, and diminishing raw resources. World trading patterns and dependence on the Third World. *Lectures:* 3 hours per week. (6 credits)

GEOGRAPHY L348
The Geography of the Far East

Prerequisite: Geog L200 or L216 or L358 or permission of department. The economic and political geography of the Far East. A study of the contrasts in resources, organization and development of the People's Republic of China, Japan, and S.E. Asia. *Lectures:* 3 hours per week. (6 credits)

GEOGRAPHY L349
Geography of Northern Lands

Prerequisite: Geog L200 or L216, or permission of department. A study of the northern lands in North America. Comparisons with Europe and the U.S.S.R. The physical characteristics, peoples, resources, past and present economies. A discussion of possible future developments and problems. *Lectures:* 3 hours per week. (6 credits)

GEOGRAPHY L358
Geography of Location I

Prerequisite: Geog L266 or L365 or equivalent. This course aims to provide the background to locational theory and spatial analysis in economic, human and physical geography. The classical theories of location in agriculture, industry and settlement of von Thunen, Weber, Chrostaller, Losch and others will be examined: their relevance to the different stages of development and resource used in First and Third World countries will also be discussed. *Lectures:* 3 hours per week. (3 credits)

GEOGRAPHY L359
Geography of Location II

Prerequisite: Geog L358. A study of manufacturing and marketing with particular reference to Canada and the United States. Spatial patterns of innovation and diffusion. Regional and interregional flows and networks. Comparison with organization and development in the developing countries. *Lectures:* 3 hours per week. (3 credits)

GEOGRAPHY L365
Geographical Analysis

Prerequisite: Geog L266 or equivalent. The application of quantitative techniques to geographical data. Analysis of point patterns, spatial distributions, and networks. Non-parametric methods. Probability and prediction. Regression and multivariate techniques in the analysis of geographical relationships. How to test the significance of data. *Lectures:* 3 hours per week. (3 credits)

GEOGRAPHY L375
Biogeography

Prerequisite: Geog L200, or L275 and L276, or Introductory Botany, Biology or Environmental Studies. A study of biotic communities and interaction within ecosystems. Topics will include: the scope of biogeography; the biosphere, food chains and energy exchange within ecosystems. Relationships between vegetation and fauna, and landforms, soil, hydrology and climate. Local, continental and world patterns of distribution; methods of dispersal, migration and population checks. Field studies will be an integral part of the course. *Lectures:* 3 hours per week, including *Lab.* Field trips. (6 credits)

GEOGRAPHY L395
Evolution of Geography

Prerequisite: See Chairman. The development of geographical thought since earliest times. Changes in the twentieth century; the quantitative revolution. Concepts and present day specialisms. Geography's contribution to environmental studies and to an understanding of the complexities of the modern world. *Lectures:* 3 hours per week. (3 credits)

51.14 Department of Geology

Professor and Chairman
D. J. McDOUGALL

Associate Professors
J. T. JENKINS
K. K. MUKHERJI

Assistant Professor
G. P. SASSANO

51.14.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1.

The superscript indicates credit value.

90 BSc Honours in Geology

Year I
15 Geol 211B³, 222A³, 231B³, 232B³, 241A³
6 Cognate Sc Elective credits to be chosen from chem 336Z⁶, 342A³, 344B³, Comp Sc 211³, 241³, Math 301A/B³
9 Elective credits
Year II
21 Geol 301B³, 311Z⁶, 312B³, 313B³, 341B³, 342B³
3 Geol Elective credits
6 Elective credits
Year III
21 Geol 400Z⁶, 411Z⁶, 421A³, 451A³, 452B³
9 Geol Elective credits

90 BSc Major in Geology

Year I
12 Geol 201A³, 203B³, 211B³, 222A³
18 Elective credits
Year II
9 Geol 241A³, 311Z⁶
3 Geol Elective credits
18 Elective credits
Year III
12 Geol Elective credits
18 Elective credits

90 BSc Specialization in Geology

Year I
15 Geol 211B³, 222A³, 231B³, 232B³, 241A³
6 Cognate Sc Elective credits to be chosen from Chem 336Z⁶, 342A³, 344B³, Comp Sc 211³, 241³, Math 301A/B³
9 Elective credits
Year II
21 Geol 301B³, 311Z⁶, 312B³, 313B³, 341B³, 342B³
3 Geol Elective credits
6 Elective Credits
Year III
15 Geol 411Z⁶, 421A³, 451A³, 452B³
3 Geol Elective credits
12 Elective credits

24 Minor in Geology

6 Geol 201A³, 203B³
18 Geol Elective credits

NOTE: Geology 205A³, 206B³, 207A³, 211B³ and 221B³ may be taken by students in other disciplines who are interested in specific subjects of a geological nature. No previous background in Geology is required.

51.14.2 DEPARTMENT OF GEOLOGY

Students planning to continue in the Honours in Geology or Specialization in Geology programmes, will normally have taken Geology 201A or equivalent, as part of their Collegial Studies. At the discretion of the Department, students lacking such preparation for their University programme may be required to take this course on a non-credit basis.

Students intending to follow joint Major programmes should obtain the approval of the chairman of the appropriate Departments.

Students seeking admission to the Honours programme on or after June 1st, 1977 will be bound by the Honours requirements outlined in § 16.2.4 of this Calendar. Students who already had Honours status by June 1st, 1977 will continue to be governed by the requirements which applied at the date of their admission to the Honours programme.

The Specialization, Major and Minor programmes in Geology offered on the Loyola and Sir George Williams campuses are essentially the same (see § 91.10). Lists of equivalent course numbers are tabulated at the end of the Geology course descriptions. In any given year, certain Geology courses will only be available on one campus, and within the restraints imposed by adequate travel time may be taken by students from the other campus.

Field Trips and Field Schools

Lectures and laboratory work cannot successfully substitute for actual observation of geology in the field. Therefore, for all students, half or full day field trips to areas of geological interest are a normal adjunct to several courses. For students in the Honours and Specialized Programmes, geological and geophysical field schools (Geology 223B and 301B) are conducted by staff members in the two weeks following the completion of examinations in the spring. Students following the Major programmes are not required to take these field schools, but, if suitably qualified, may be granted permission to do so by the department.

Summer Employment

It is strongly recommended that prior to graduation at least one summer be spent in some phase of geological work. Although the Department of Geology cannot guarantee summer employment, its students can normally expect to be engaged in suitable work during the summer months with government agencies or private companies.

51.14.3 COURSE DESCRIPTIONS

GEOLOGY 201A
Physical Geology

Prerequisite: None. The nature, origin and evolution of the universe, stars and of planetary systems: the physical properties of the Earth and its environment; the materials and structures of the Earth's interior and surface, and the processes affecting these regions, such as continental drift, the formation of oceanic basins and mountain building. *Lectures:* 3 hours per week. Text: R. J. Foster: *General Geology* (Merrill) (3 credits)
NOTE: Geology 201A is primarily designed to provide an introduction to Geology for students who are not Majoring in the department.

GEOLOGY 202B
Elementary History of the Earth

Prerequisite: None. The hydrologic cycle and the cycle of erosion; the measurement of geologic time; the history of life on earth and the geologic evolution of North America; glaciation and the ice age; the nature and origin of mineral deposits; the geology of coal, oil and gas; the conservation of natural resources. *Lectures:* 3 hours per week. Text: R. J. Foster: *General Geology* (Merrill) (3 credits)
NOTE: Geology 202B is primarily designed to provide an introduction to Geology for students who are not Majoring in the department.

GEOLOGY 203Y
Introductory Laboratory Course in Geology

Prerequisite: None. Laboratory studies include investigation of rock and mineral specimens. Interpretation of topographic maps and aerial photographs; interpretation of Geomorphic and Geologic Maps — and the examination of selected fossils. Field trip to local areas. *Lab:* 3 hours per week. Text: to be announced. (3 credits)
NOTE: Geology 203Y is primarily designed to provide an introduction to Geology for students who are not Majoring in the department.

GEOLOGY 205A
Environmental Geology

Prerequisite: None. Geology in the ecosystem. The earth's atmosphere, hydrosphere, lithosphere and biosphere in the geologic time. Long range geological effects of ecosphere pollution. Trace nutrients and health with emphasis on the geology of trace elements and its cause and effect on biological systems. Understanding of, control for, and prevention of natural hazards. Changes in the earth's climate. Role of Geology in land use. *Lectures:* 3 hours per week. Text: To be announced. (3 credits)

GEOLOGY 206B
Continental Drift

Prerequisite: None. An introduction for non-Majors to the concept of Continental Drift. The origin and development of the theory, the nature of the earth's crust, the ocean floor, and the theory of sea floor spreading. The revolution in the Earth Sciences as a result of widespread acceptance of the concept. *Lectures:* 3 hours per week. Text: Wilson, ed: *Continental Drift* (Freeman) (3 credits)

GEOLOGY 207A
Geology of Resources

Prerequisite: None. Rocks and Ore minerals. Present and future availability of earth resources. The nature, classification and mode of occurrence of mineral deposits. Exploration, development and rational exploitation of mineral resources. Elements of mining economics. Distribution of oil, gas, coal, and base metal deposits. Evaluation of the effects of mining operations on environment. *Lectures:* 3 hours per week. Text: To be announced. (3 credits)

GEOLOGY 211B
Mineralogy I

Prerequisite: None. Physical and chemical properties of minerals, elements of crystal chemistry, mineral classification, silicate structure and a description of important silicate mineral groups are topics covered in lectures. In the lab, the composition, diagnostic properties and geological environments of some 150 minerals (non-silicates and silicates) are emphasized and physical and simple chemical tests are applied to the identification of these minerals. *Lectures:* 1½ hours per week. *Lab:* 1½ hours per week. Text: Hurlbut: *Dana's Manual of Mineralogy* (Wiley, 18th ed) (3 credits)

GEOLOGY 221B
Physical Oceanography

Prerequisite: None. Geomorphology of the ocean floor with emphasis on the significance of the midoceanic ridges and trench systems. The physical and chemical characteristics and circulation of ocean waters and their causes. Tides and waves. Distribution and origin of terrigenous, biogenous, chemogenic, volcanogenic and polygenic sediments in the major ocean basins. Conditions of oceanic sedimentation. Quantitative distribution of suspended sedimentary materials at the ocean bottom. Size composition of suspensions and bottom sediments. Economic resource potential of the oceans. *Lectures:* 3 hours per week. Text: Gross: *Oceanography* (Prentice Hall) (3 credits)

GEOLOGY 222A
Invertebrate Paleontology

Prerequisite: Geology 201A or equivalent. A systematic survey of major invertebrate fossil groups with chief emphasis on morphology,

classification, and geologic occurrence. Study of principles of evolutionary concepts and biostratigraphic zonation. Some selected discussion on paleoecology. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. Text: Moore, La Licker, Fischer: *Invertebrate Fossils* (McGraw Hill) (3 credits)

GEOLOGY 231B
Earth Physics

Prerequisite: Geology 201A or equivalent. This course is directed toward the general understanding of physical phenomena of the solid earth. Subjects for consideration include the following: earth's origin, age, radioactivity, magnetism, gravity field, seismology, heat flow, structure and physical state of the earth's interior, theory of sea-floor spreading, theories of mountain formation. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. Text: To be announced. (3 credits)

GEOLOGY 232B
Exploration Geology

Prerequisite: Geology 231B. Surveying, surface and sub-surface mapping methods, property evaluation and development, mining operation and cycles, soil geochemistry, data storage and retrieval. The second part of the course will include actual field survey using seismic, magnetic, gravity and electrical techniques. Students will be required to pay for room and board for a one-week period in the field school. *Field Work:* 2 weeks in May at the Concordia Geophysics Field School. (3 credits)

GEOLOGY 241A
Structural Geology

Prerequisite: Geology 201A or equivalent. The recognition and origin of geologic structures. Primary structures, faults, folds and joints, principles of rock deformation. Laboratory includes a survey of methods of structural interpretation, structural experiments and field trips. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. Text: Dennis: *Structural Geology* (Ronald). Laboratory: Ragan: *Structural Geology* (Wiley); Blackader: *Guide for the Preparation of Geological Maps and Reports* (Department of Energy Mines and Resources) (3 credits)

GEOLOGY 301B
Field Geology

Prerequisite: Geology 241A and 311Z. Surface and underground field mapping methods. Preparation of geological maps, sections and reports from field notes, diagrams and air photos. Special field trips to examine specific geologic problems. Students will be required to pay for room and board for a ten-day period. *Field Work:* 2 weeks in May at the Concordia Geology Field School. (3 credits)

GEOLOGY 302B
Geostatistics and Computer Applications in Geology Geology

Prerequisite: Geology 201A or equivalent. Statistical analysis and computing methods applied to geological problems. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. Text: To be announced. (3 credits)

GEOLOGY 303B
Precambrian Geology

Prerequisite: Geology 342B. Evolution of the earth in the Precambrian era. Problems in Precambrian correlation, paleoclimates and structural history. Emphasis on Canadian and North American Precambrian areas. One term paper to be prepared. *Lectures:* 3 hours per week. Periodic Seminars. (3 credits)

GEOLOGY 311Z
Elementary Petrology

Prerequisite: Geology 211B. The identification and description of hand specimens of sedimentary, igneous and metamorphic rocks. Rock associations and methods of classifying rocks. *Lectures:* 3 hours per week for two terms. *Lab:* 3 hours per week for two terms. (6 credits)

GEOLOGY 312A
Mineralogy II

Prerequisite: Geology 211B. Point and translational symmetry, point groups, space groups, interpretation of space group tables, elements of crystal chemistry, chemistry and phase relations of important rock forming minerals. Stereographic projections of crystal data, the Universal Stage and powder diffractometry in identifying minerals are subjects stressed in Labs. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. Texts: Bloss: *Crystallography and Crystal Chemistry;* Deer, Howie and Zussman: *An Introduction to the Rock Forming Minerals* (3 credits)

GEOLOGY 313B
Optical Mineralogy

Prerequisite: Geology 211B. Lectures deal with the theoretical background necessary for the use of the petrographic microscope. In the laboratory, oil immersion techniques for the determination of isotropic and anisotropic minerals in powder form are studied. If time permits, an introduction to the use of the four axis Universal Stage is given. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. Text: Wahlstrom: *Optical Crystallography* (Wiley, 3rd ed); U.S.G.S. Bull 848, *The Microscopic Determination of the Non-opaque Minerals* (2nd ed) (3 Credits)

GEOLOGY 314B
Sedimentary Petrology

Prerequisites: Geology 311Z and 313B. (May be taken concurrently.) The occurrence and formation of sedimentary rocks. Laboratory includes a brief survey of techniques applied to unconsolidated sediments, but particular emphasis is placed on the microscopic examination of sedimentary rocks. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. Text: Blatt, Middleton, Murray: *Origin of Sedimentary Rocks* (Prentice Hall) (3 credits)

GEOLOGY 315A
Introduction to X-ray Crystallography

Prerequisites: Geology 211B and 312A. The nature of X-rays, diffraction, the reciprocal lattice, powder diffractometer, powder cameras, single crystal methods. Laboratory work will stress the techniques of powder diffractometry and Precession photography. *Lectures:* 2 hours per week. *Lab:* 4 hours per week. References: Bloss: *Crystallography and Chemistry* (Holt, Rinehart, Winston,) 1971; Sands: *Introduction to Crystallography* (Benjamin Inc, 1969): Azaroff: *Elements of X-ray Crystollography* (McGraw-Hill) (3 credits)

GEOLOGY 331B
Exploration Geophysics

Prerequisite: Geology 231B. An introduction to geophysical methods of prospecting and of investigating subsurface structures. The theories, uses and limitations of various magnetic, electrical, gravitational and seismic methods are explained and compared. The practical operation of the instruments is reviewed and actual field results are analyzed. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. Text: Dobrin:

Introduction to Geophysical Prospecting (McGraw-Hill) (3 credits)

GEOLOGY 332B
Exploration Geochemistry

Prerequisites: Geology 201A and 211B. An introduction to geochemistry including the chemical make-up of the solar system and the geochemistry of the atmosphere, hydrosphere, crust, mantle and core. The chemistry of igneous, sedimentary and metamorphic rocks, with some emphasis on the trace elements which characterize each. Anomalous trace elements concentrations in rocks, soils and water and the application to mineral exploration geochemistry. In the laboratory the material discussed in the lectures is illustrated by geochemical calculations, trace element distribution maps and methods of geochemical analysis. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. Text: To be announced. (3 credits)

GEOLOGY 341B
Photogeology

Prerequisite: Geology 241A or permission of the Department. Scope and purpose of photointerpretation; geometry of aerial photographs and basic applied photogrammetry; geological interpretation, both qualitative and quantitative, of aerial photographs from Canada and other countries; techniques used in base map preparation with and without control points; exercises in photogeological mapping using stereoscopes and plotters. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. Text: Ray: *Aerial Photographs in Geologic Interpretation and Mapping* (U.S.G.S.) (3 credits)

GEOLOGY 342B
Tectonics

Prerequisite: Geology 241A. Relation of deformation to intrusion and sedimentation. Consideration is also given to multiple deformation, structural petrology, theories of geosynclines and plate tectonics. Laboratory: Consists of tectonic analysis using geologic maps. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. Text: Dennis: *Structural Geology* (Ronald) (3 credits)

GEOLOGY 351A
Engineering Geology

Prerequisite: Geology 201A or equivalent (Geology 241A and Geology 341B recommended). Engineering properties of rocks and soils. Landslides, groundwater, frost action and permanently frozen ground. Application of geology to engineering problems — concrete petrology, tunnels slope control, foundations, roads, airports, dams and reservoirs. One term paper to be prepared. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. The laboratory period will include field trips, engineering geology, case histories, and feasibility study of engineering geology problem. (3 credits)

GEOLOGY 400Z
Undergraduate Thesis

Prerequisite: Permission of the Department. Honours students in their final year are expected to show competence in isolating and examining a geological problem using techniques available within the department, working in conjunction with assigned faculty advisers. Course evaluation will be based on the student's performance in the investigation and on the written report. Specialized students may also take the course at the discretion of the Department. 6 hours per week. (6 credits)

GEOLOGY 411Z
Igneous and Metamorphic Petrology

Prerequisites: Geology 311Z and 313B. Presentation and interpretation of phase relations, mineralogy, fabric, classifications and petrogenesis of the igneous rocks. The scope of metamorphism, the zone, grade and facies concepts of metamorphism, ACF and AKF diagrams. In the laboratory, megascopic and microscopic techniques are used in the examination of rocks representative of the more common igneous and metamorphic varieties. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. Text: Hyndman: *Petrology of Igneous and Metamorphic Rocks* (McGraw-Hill); Moorehouse: *The Study of Rocks in Thin Section* (Harper). References: Deer, Howie and Zussman: *An Introduction to the Rock Forming Minerals* (Longmans); Spry: *Metamorphic Textures* (Pergamon); Winkler: *Petrogenesis of Metamorphic Rocks* (Springer-Verlag, 2nd ed) (6 credits)

GEOLOGY 412A
Mineral Physics

Prerequisites: Geology 211B, 311Z, 312A, 332B. Selected aspects of the relationship of solid state characteristics of minerals to their conditions of formation and subsequent history. In the laboratory details of crystal structure are considered and readily developed changes in solid-state conditions in minerals and metals are used to amplify the lecture material. *Lectures:* 2 hours per week. *Lab:* 4 hours per week. Texts: Deer, Howie and Zussman: *An Introduction to the Rock Forming Minerals* (Longmans); Spry: *Metamorphic Textures* (Pergamon). References: Van Vlack: *Elements of Materials Science, (Addison-Wesley, 2nd ed); and/or Wulf et al: The Structure and Properties of Materials* (Wiley) (3 credits)

GEOLOGY 421A
Stratigraphy

Prerequisites: Geology 201A and 222A. Introduction to historical developments of stratigraphic concepts. Role of natural dynamic processes in the evolution of stratigraphic record. Discussion on stratigraphic classification and nomenclature. Major classification of tectonic elements in sedimentary basins and broad patterns in the distribution of sedimentary rocks in relation to tectonic framework. Detailed analysis of stratigraphic principles: such as correlation (lithostratigraphic, biostratigraphic, chronostratigraphic), facies (lithofacies, biofacies), unconformities and cyclotherm. Critical evaluation of stratigraphic sequences using modern and ancient examples for the recognition of aeolian, alluvial fan, fluvial, lacustrine tidal flats, barrier coastlines, carbonate shoreline, shallow marine and submarine environments. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. Text: R. K. Matthews: *Dynamic Stratigraphy* (Prentice Hall) (3 credits)

GEOLOGY 441A
Geomorphology

Prerequisite: Geology 201A or equivalent. Fluvial and slope processes, influence of climate, rock type and structure on the development of land forms, coastal features; aeolian processes, glacial and periglacial activity. Laboratory work emphasizes interpretation of aerial photographs and topographic maps and a field excursion to local area. *Lectures:* 3 hours per week. *Labs:* 3 hours per week. Text: Ray: *Aerial Photographs in Geologic Interpretation and Mapping* (U.S.G.S.); Leopold, Wolman, and Miller: *Fluvial Processes in Geomorphology* (Freeman) (3 credits)

GEOLOGY 442B
Geology of Canada

Prerequisite: Geology 201A (Geology 421A or Geology 222A is recommended). Geologic study of the major geomorphic subdivision of Canada with special emphasis on stratigraphy, correlation,. paleography, sedimentation and tectonics. Reading assignments and colloquium are used to probe into specific problems. *Lectures:* 3 hours per week. *Colloquium:* 1-3 hours per week. Text: *Geology and Economic Minerals of Canada* (Econ. Geol. Series No. 1 of the Geological Survey of Canada, 5th ed) (3 credits)

GEOLOGY 451A
Economic Geology

Prerequisites: Geology 201A or equivalent, and 241A. The origin, classification and evaluation of ore and petroleum deposits. Laboratory includes problems in ore evaluation and petroleum geology, and the examination of suites from representative mining camps. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. Text: To be announced. (3 credits)

GEOLOGY 452B
Mineral Deposits

Prerequisites: Geology 311Z, 313B and 451A. The origins, type of occurrence and classification of metallic mineral and non-metallic mineral deposits. The application of all fields of geology to a specific problem. Laboratory includes exercises on property and ore evaluation, an introduction to incident light microscopy and a series of examinations and a term project on suites from various ore deposits. *Lectures:* 3 hours per week. *Lab:* 3 hours per week. Text: Park and MacDiarmid: *Ore Deposits* (Freeman, 2nd ed) (3 credits)

Equivalent Geology courses on Loyola and Sir George Williams Campuses.

LOYOLA	*SIR GEORGE*
201A (301A)	N-215
202B (303B)	N-323 (425)
203Y (302Y)	N-216
205A	
206B	
207A	
211A (311Y)	N-231 (221)
221B	
222A (321A)	N-220 (N-420) (223)
231B	N-217
232B (333B)	N-245
241A (443A)	N-246 (N-346)
301B (401B)	N-353
302B	
303B (505B)	N-464
311Z (412Z)	N-333
312A (313A)	N-338
313B (315B)	N-232 (222)
314B (413B)	N-335
315A (411)	N-445
331B (331B)	N-441 (441)
332B (431B)	N-462 (442)
341B	N-352 (422)
342B (445B)	N-349 (429)
351A (541A)	N-475
400Z (502Z)	N-466
411Z (512Z)	N-342 (426)
412A (531A)	N-476
421A (521A)	N-322 (424)
441A	N-328
442B (523B)	N-421 (430)
	N-370
451A (551A)	N-455
452B (552Z)	N-456

(Brackets indicate old Loyola and Sir George Williams numbers)

51.15 Health Education

Coordinator
GLADYS LENNOX
Assistant Coordinator
SR. CECILE LABONTE

Assistant to the Coordinator
ADAM LISIEWICZ

51.15.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 51.1.

The superscript indicates credit value.

90 BA Specialization in Community Nursing

Prerequisite: R.N.
Year I
18 Nurs L205[3], Heal L206[6], L209[3], L212[6]
12 Elective credits
Year II
24 Nurs L301[3], L307[3], L320[6], L323[3], L324[6], L325[3]
6 Elective credits
Year III
24 Nurs L430[6], L432[6], L440[6], L445[3], L447[3]
6 Elective credits

90 BA Major in Community Nursing

Prerequisite: R.N.
Year I
18 Nurs L205[3], Heal L206[6], L209[3], L212[6]
12 Elective credits
Year II
15 Nurs L320[6], L323[3], L324[6]
15 Elective credits
Year III
18 Nurs L430[6], L432[6], L440[6]
12 Elective credits

45 Certificate in Community Nursing

Prerequisite: R.N.
45 Nurs L213[3], L301[3], L307[3], L320[6], L323[3], L324[6], L325[3], L430[6], L432[6], L440[6]

42 Certificate in Health Education

36 Heal L208[6], L319[3], L320[6], L323[3], L408[6], L410[6], L418[6]
6 Heal Elective credits

51.15.2 HEALTH EDUCATION

The Health Education Division offers programmes and Courses designed for three groups of students.
I Registered nurses: courses in community nursing; **II** Students from various disciplines: Health Education courses as electives; **III** Individuals working in a community; courses dealing with community problems and the role of the community workers.

I Community Nursing Programme
Purpose of the Programme
The programme in Community Nursing is designed to offer further Education to experienced Registered Nurses working in community settings such as schools, industry, community clinics, doctors' offices, hospital services and other agencies. Consideration has been given to the nurses' emerging role as a member of the multidisciplinary health team and her interests in the fields of community nurse practitioner, health service administrator, health educator, and other specialities. Therefore, courses are designed for their relevance to society and professional needs in general, and to the needs of the student and consumer specifically. For this reason the following options are offered:

1) *BA Specialization in Community Nursing* (90 credits) — 66 required credits, and 24 electives.

2) *BA Major in Community Nursing* (90 credits) — 51 required credits, and 39 electives.

3) *Certificate in Community Nursing* — 45 required credits.

Admission Requirements: Entry into the programme will be based on a careful assessment by the Assistant Coordinator as to the background and goals of the applicants before acceptance can be assured. The student must present:

1) A nursing diploma from an approved school of nursing.
2) An authorization to practice nursing issued by the Order of Nurses of Quebec or ability to submit proof of current registration in the Province or country from which he/she comes.
3) For any nurse who graduated in 1972 or later, a written declaration from a hospital

showing at least one full year of employment as a nurse and indicating the specific nature of that employment.
4) Where a student cannot submit prerequisite documentation, he/she may request the right to take a qualifying examination 3 weeks prior to registration.
5) Relevant transcripts should be submitted to the Admissions Office well in advance of registration.
Grade

The students will be expected to obtain a grade of 65% in all Nursing and Health courses in order to continue in the programme.

Preregistration: Preregistration is mandatory for:
1) Entry into the Community Nursing Programme.
2) Course selection.
3) Selection of Health Education electives. Students are obliged to contact the *Health Education Office* (Local 420) early to make an appointment with the *Assistant Coordinator for the Community Nursing Programme.*

II Courses in Health Education

Courses are offered in the field of Health Education as electives for our students as well as for students of other disciplines.

III Certificate Programme in Health Education

These courses are offered to professionals employed full time or as volunteers in health clinics, educational programmes, hospitals, and other community settings. The Certificate will be granted upon successful completion of 42 credits, 36 of which are mandatory and the remaining 6 Health Education electives. The programme may be taken on a full or part-time basis. One course per semester is mandatory unless this is waived by the Coordinator of Health Education. Students are required to maintain an average of 65% in order to continue in the programme.

Preregistration: Preregistration is mandatory for:
1) Entry into the Certificate in Health Education.
2) Course selection.
3) Selection of Health Education electives. Students are obliged to contact the Health Education Office (local 406) to make an appointment to see the Assistant to the Coordinator.

51.15.3 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.5.

NURSING COURSES

NURSING L205
Current Issues in Nursing

An introductory course designed to explore at the local and national level educational and professional concepts of nursing, their similarities and differences and their influence on the changing patterns in nursing. The major intent is to illustrate the relationship between the profession, the impinging pressure to change and nursing's reaction and response to this concept. (3 credits)

NURSING L213
Basic Nutrition

The goal of this course is to provide instruction on theoretical and practical knowledge of *normal* nutrition. The course content includes: food habits and food ways; psychological, sociological and cultural effects on food habits; the world food crisis; hunger and its effects on people; major nutrients and their interrelationships in human nutrition. The Nutrition Canada Survey assessment of nutrition status will be discussed. Nutrition during the life span . . . pregnancy and lactation, growth and development, aging and the aged will be described. Weight control, food economics, protection of food supply, food fads and fallacies will be examined. (3 credits)
NOTE: This course is not available to students who have received credit for an equivalent course.

NURSING L301
Pharmacology for Nurses

Prerequisite: Heal L206 or equivalent. This course is designed to introduce nurses to the basic concepts of drug pharmacokinetics, as the basis for rational therapeutics. The major drug classes will be reviewed, emphasizing those drug effects that are important for the Registered Nurse in providing modern therapeutic care. Stress will be made on the importance of collaboration between professions for the better care of the patient. (3 credits)

NURSING L307
Pharmacology: The Nurse's Role in the Community

Prerequisite: Nurs L301. The purpose of this course is to apply the principles of pharmacodynamics and pharmacokinetics given in Nurs L301 to individual and community health problems. The course content includes identification and discussion of major drug classes: hormones, contraceptives, psychotropic drugs, alcohol, opiates, barbiturates, stimulants, hallucinogens, nicotine, antibiotics, etc. The consequences of drug use and abuse in personal, family and community life, as well as the nurse's role will be considered. (3 credits)

NURSING L320
(Also given as Andragogy L320, Bio-PE L484, and Health L320)
Interviewing Techniques and Counselling Concepts

Prerequisite: Heal L209 or equivalent. A course in which the student examines the dynamics of helping interviews, models of human effectiveness, and theories of counselling. The variety of issues to be covered include the enhancement of specific skills through different training experiences, a proper emphasis on self-understanding, an awareness of the role of philosophy, ethical standards and research. This course demands a high level of observation, participation and involvement from each student. (6 credits)

NURSING L323
(Also given as Bio-PE L481 and Health L323)
Teaching Strategies for the Health Professional

Prerequisites: Heal L209 and Nurs L320, or permission of the Programme Coordinator. This course is designed to meet the needs of individuals who are involved in education programmes, i.e., schools, industry, clinics, volunteer agencies, in-service programmes, etc., aimed at promotion and maintenance of health, prevention of disease and rehabilitation. (3 credits)

NURSING L324
Pathophysiology

Prerequisite: Heal L206 or successful completion of a qualifying exam. An applied physiology course as related to disease. The topics will cover the physiology of the red corpuscles and anemias, blood and circulation as related to heart disease, respiration, digestion, excretion, endocrines, reproduction, and the nervous system. Stress will be made on the application of physiology to the disease. (6 credits)

NURSING L325
Community Nutrition

Prerequisites: Nurs L213 or equivalent and Nurs L323. This course will apply basic nutrition knowledge to the problems of nutrition in the community. It will prepare students to act as facilitators of change in food habits and allow them to practice clinical evaluation of nutritional status through fieldwork under supervision. Community programmes and resources to improve nutritional status will be described. (3 credits)

NURSING L393
Selected Topics in Nursing

Prerequisites: As determined by the Programme Coordinator. The theme and the methodology will vary according to the special interests of the professor and the needs of the students. The course is designed to provide students with the opportunity to extend their studies beyond the subjects already included in the curriculum. (3 credits)

NURSING L394
Selected Topics in Nursing

Prerequisites: As determined by the Programme Coordinator. A student may repeat Nursing L393, provided that the content is different, by registering for credits under Nursing L394. (3 credits)

NURSING L430
Community Health Nursing

Prerequisites: Heal L212, Nurs L323. The nature of community health nursing practice requires that current knowledge derived from the biological and social sciences, ecology, clinical nursing and community organization be utilized. This course in community health nursing is concerned both with the health and the community as an interacting whole, and with the entire gamut of health care which embraces the promotion and preservation of the health of individuals, families and the community. This course includes specially designed projects and fieldwork in the community which provide learning experiences in relation to the overall objectives of the programme. (6 credits)

NURSING L431
School Health Programme

The prepared course of action taken by the school in the interest of the health of the school child and school personnel. It includes health services, health instruction, and healthful school living. Emphasis will be directed toward the need for coordination of hospital, school, and community as suggested by Bill 65. (3 credits)

NURSING L432
Primary Care: The Nurse's Role

Prerequisites: Nurs L301, L324, L325. This course focuses on the "expanded role" of the nurse with responsiblity for defined communities. It will address itself to different types of screening processes; procedures for obtaining a satisfactory and meaningful health history; and methods for making a judicious referral for definite diagnosis and management. Concentration will be on acquiring skills that lead to the determination of health status and limitations of clients wherever they are, rather than to a role of clinical management of patients. (6 credits)

NURSING L433
Nursing Intervention and the Later Years

A humanistic study of the physiological and psychological adjustments necessary to adapt to the life-style of the changing years. An in depth look at the need for accurate nursing assessment in order to utilize existing health resources for the maintenance of health and prevention of disease, and rehabilitation where necessary. The course will allow the student an opportunity to develop realistic guidelines for home care, referral, health counselling and follow-up. (3 credits)

NURSING L434
Physical Assessment for Community Nurse Practitioners

Prerequisite: Approval of the Programme Coordinator. This is an advanced course in physical assessment for community nurses. Emphasis is placed on the ability to recognize normal systemic functions and their relation to disease. A practicum is scheduled in various hospitals, clinics and/or health centers approved by a faculty team. (6 credits)

NURSING L437
Occupational Health Nursing

This course will deal with the relation of doctor and nurse, employer and employee; management and the medical department. Also the role of the nurse today and tomorrow in our rapidly changing society. Instruction will consist of lectures, group discussion and practical applications through field work and simulation. (3 credits)

NURSING L440
Family Structure and Health Care Delivery

Prerequisites: Nurs L430 and L432 or permission of the Programme Coordinator. This course is designed to study some aspects of family structure, its development through various stages of the family life cycle and its interactive behaviour within the health system. Consideration will be given to the dynamics created by the constantly changing family relationships and their effect on the community. The emphasis will be on home visiting and the nurse's role in recognizing family needs and providing appropriate nursing intervention. It will also provide an opportunity for nurses to apply their knowledge and basic skills in health promotion. (6 credits)

NURSING L445
Nursing Practicum I

Prerequisite: Permission of the Programme Coordinator. In cooperation with a Tutorial

Adviser, the nurse will choose a field of interest within the health care system for fieldwork. The student will have freedom to choose how quickly the practicum requirements are satisfied. There will be no final exam. Students will submit a written report at the end of the term based on the learning objectives established with the adviser at the beginning of the course. (3 credits)

NURSING L447
Nursing Practicum II

Prerequisite: Nurs L445. In cooperation with a Tutorial Adviser, the nurse will choose a field of interest within the health care system for fieldwork. The student will have freedom to choose how quickly the practicum requirements are satisfied. There will be no final exam. Students will submit a written report at the end of the term based on the learning objectives established with the adviser at the beginning of the course. (3 credits)

NURSING L495
Advanced Topics in Nursing

Prerequisites: As determined by the Programme Coordinator. The theme will vary according to the special interests of the professor and the needs of the students. The course is designed to provide students with the opportunity to take advantage of the special interests and expertise of a professor and to develop this knowledge and these abilities in an area not covered in the programme. (3 credits)

NURSING L496
Advanced Topics in Nursing

Prerequisites: As determined by the Programme Coordinator. A student may repeat Nursing L495, provided that the content is different, by registering for credits under Nursing L496. (3 credits)

NURSING L497
Advanced Topics in Nursing

Prerequisites: As determined by the Programme Coordinator. The theme will vary according to the special interests of the professor and the needs of the students. The course is designed to provide students with the opportunity to take advantage of the special interests and expertise of a professor and to develop this knowledge and these abilities in an area not covered in the programme. (3 credits)

NURSING L498
Advanced Topics in Nursing

Prerequisites: As determined by the Programme Coordinator. A student may repeat Nursing L497, provided that the content is different, by registering for credits under Nursing L498. (3 credits)

HEALTH EDUCATION COURSES

HEALTH L201
Cell Functions in Health and Disease

An introductory course of cell physiology relating cell function to disease. The following topics will be covered: red blood cells and anemias, blood typing and tissue matching, bacteria and immunity, genetics and hereditary disease, protozoa and parasitic diseases, viruses and viral infections. (3 credits)

HEALTH L206
Applied Human Physiology

Prerequisites: R.N., CEGEP Biology or Biology L201, or equivalent. A course on the *functions* of the human body. A detailed analysis of homeostasis from a *systems* approach will be given. Physiological processes as *applied* to clinical testing will be described. (6 credits)

HEALTH L208
(Also given as Bio-PE L488)
Nutrition in the 70's

This course will study the influence of socio-economic and political systems on the nutritional status of the individual and the interrelationship between food habits and the cultural, social and psychological aspects of life. Topics will include diet-related problems such as obesity, heart disease, faulty eating habits, malnutrition. Food budgeting for all levels of the socio-economic structure will be examined. (6 credits)

HEALTH L209
(Also given as Andr L209)
Personal Interrelations

This course is designed to provide an orientation to the field of interpersonal relationship and human awareness, focusing particularly on relating to and working with other people. Concepts of personal growth and development will be highlighted. (3 credits)

HEALTH L212
(Also given as Bio-PE L482)
Clinical Epidemiology and Bio-Statistics

An introductory course on the methods of measuring the distribution and determinants of disease frequency in Man. Measures of population health and health services utilization will be covered. Variability and the need of statistics will be stressed. (6 credits)

HEALTH EDUCATION L251
Hunger in the Classroom: The School's Role

Review of evidence indicating existence of malnutrition in schools in Quebec. Followed by discussion of observable effects of hunger and malnutrition in the classroom. Discussion of various programs and approaches by the school administration, the school board, the teachers, nurses, etc., taken to alleviate the problem. Topics of discussion will include: Action for school lunches — Malnutrition — learning and behaviour — Nutrition education program. (3 credits)

HEALTH L261
Community Health Information

This course will investigate the formal and informal patterns in Health Education. This information will be applied to plan pertinent programmes that serve society. Data collected will be used in curriculum planning exercises and programme development within formal educational systems such as schools and CEGEPs, in such areas as cardiovascular disease, anti-smoking clinics, family life education. (3 credits)

HEALTH L270
School Health Services Seminar

The seminar will deal with current issues of school health, nationally and locally and their effect on our present school health programmes. It will consider the interrelation of the school administrators, the family, community and health professionals in utilizing existing resources for a more efficient distribution of health care to school age children. The need for leadership, group participation and community cooperation in defining and dealing with priorities will be demonstrated through a medium of case studies and problem solving techniques. (6 credits)

HEALTH L303
Community Dental Health

This course is designed to enlighten the student of problems associated with dental care within the community. With the help of films and audio-visual aids, we will explore the realms of dentistry and consider the importance of the Dossier, Prevention and Rehabilitation. Our approach will permit the student to encourage open discussion and seminars during lecture hours. (3 credits)

HEALTH L319
(Also given as Bio-PE L483)
Drug Use and Abuse

The course is structured to introduce non-medical personnel to the modern concepts of drug therapeutics, and to discuss the consequences of use and abuse of drugs. The drug classifications will include steroids, antibiotics, minor and major psychotropics and the potential chronic abuse of drugs such as amphetamines and other stimulants, barbiturates and other sedatives, hallucinogens, minor tranquilizers, opiate narcotics, alcohol and tobacco. (3 credits)

HEALTH L320
(Also given as Andragogy L320, Bio-PE L484, and Nursing L320)
Interviewing Techniques and Counselling Concepts

Prerequisite: Heal L209 or equivalent. A course in which the student examines the dynamics of helping interviews, models of human effectiveness, and theories of counselling. The variety of issues to be covered include the enhancement of specific skills through different training experiences, a proper emphasis on self-understanding, an awareness of the role of philosophy, ethical standards and research. This course demands a high level of observation, participation and involvement from each student. (6 credits)

HEALTH L323
(Also given as Bio-PE L481 and Nurs L323)
Teaching Strategies for the Health Professional

Prerequisites: Heal L209 and Nurs L320, or permission of the Programme Coordinator. This course is designed to meet the needs of individuals who are involved in education programmes, i.e., schools, industry, clinics, volunteer agencies, in-service programmes, etc., aimed at promotion and maintenance of health, prevention of disease, and rehabilitation. (3 credits)

HEALTH L331
Health Professional Role in Pre-and Post-Retirement

This course will investigate the needs, motivation, level of interest of individuals considering sex, age, education, culture, environment, socio-economic status or life experiences. It will determine the role of adequate health care, family interaction, community support, short and long term planning in dealing with the identified needs. The course will provide an opportunity for the student to investigate legal, economic and social aspects in developing programmes that are realistic within our present society. (3 credits)

HEALTH L397
Selected Topics in Health Education

Prerequisites: As determined by the Programme Coordinator. The theme and the methodology will vary according to the special interests of the professor and the needs of the students. The course is designed to provide students with the opportunity to extend their studies beyond the subjects already included in the curriculum. (3 credits)

HEALTH L398
Selected Topics in Health Education

Prerequisites: As determined by the Programme Coordinator. A student may repeat Health L397, provided that the content is different, by registering for credits under Health L398. (3 credits)

HEALTH L401
Public Health Administration

The basic objective of this course is to make the student aware of the administrative structure of the health care system in the Province of Quebec and elsewhere. Emphasis will be centered around the planning of health care programmes, health economics and various health administrative systems commonly used today. Case analysis will be used to study the solving of health administrative problems. (3 credits)

HEALTH L403
The Law and the Health Professional

This course is designed for nurses, other health professionals and administrators working in various health services. The content includes an analysis of Quebec and Canadian Law, civil and criminal liability and how it affects the health workers, the legal status of a hospital corporation and a community clinic and their interior workings. This course will also provide discussions of patients' rights, informed consent to treatment, recent Canadian court decisions on malpractice and other subjects of interest to the students. (3 credits)

HEALTH L408
(Also given as Andragogy L408 and Bio-PE L486)
Group Structure and the Role of the Community Worker

The course is developed to assist volunteers, interested citizens, street workers, and individuals with no formal health training, but working as a part of a multidisciplinary team, to identify their roles in order to play a more effective part as a community worker. Assignments will be directed toward practical applications of field work to problem-solving in a field of their choice: i.e., post-retirement, rehabilitation of drug addicts and alcoholics, single parents, etc. (6 credits)

HEALTH L410
Community Mental Health

This course will explore the historical and traditional models of mental health as they relate to the more progressive model of community mental health. The intent is to gain some knowledge of topics of concern within the community: crisis and suicide prevention, how to handle specific situations such as problems in a school, industry, home and clinical setting. The course is structured for people in the helping professions: nurses, social workers, counsellors, teachers, nutritionists, etc. (6 credits)

HEALTH L418
Current Health Issues

Prerequisite: Heal L261. This course deals with areas selected for their epidemiological importance in the understanding of modern health problems. Implications of human ecology, pollution and environment on disease outcomes will be described. (6 credits)

HEALTH L472
(Also given as Bio-PE L480)
Special Workshop on Human Sexuality

The course investigates "Psychological Concepts of Human Sexuality as they influence Family Planning and Sex Education": The study will explore variations in sexual patterning, therapy and counselling, biological, anthropological and ontological perspectives of sexuality. Open to educators, guidance counsellors, nurses, social workers, and psychologists. (6 credits)

The following course is a university level course which was offered in the years indicated but did not appear in the official Calendar.

1975 and 1976 (Summers)
Health Education 596Z
Comparative Social Change in Health Education
(6 credits)

51.16 Department of History

Associate Professor and Chairman
R. TITTLER

Professor
C. B. O'KEEFE, S. J.

Associate Professors
F. G. W. ADAMS
W. E. AKIN
R. T. COOLIDGE
M. G. DECARIE
W. H. HUBBARD *(Vice-Chairman)*
M. MASON

Assistant Professors
R. PORTER
M. J. VIPOND

Lecturer
R. RUDIN

51.16.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with §51.1.

The superscript indicates credit value.

NOTE: Students may take a Double Major in History and in another department. They may also couple a Major in History with a Minor (24 credits) in any of the programmes listed under Interdisciplinary Studies, such as: Third World Studies, Canadian Studies, Women's Studies, Medieval Studies. (see § 51.17)

72 BA Joint Honours in English and History

6 Engl L418[6]
18 Engl credits chosen from three different periods, at least two of which should be supported by parallel Hist courses
6 Engl Elective credits
6 Engl or Hist Elective credits
12 Hist credits to parallel Engl courses
12 Hist Honours Seminars
6 Hist Elective credits
6 Joint Engl/Hist tutorial, Engl or Hist L490[6]

72 BA Joint Honours in French and History

30 French credits:
6 Fr L210[6]
6 Chosen from Fr L351[3] and L353[3] or L355[3]
6 Chosen from Fr L241[3] and L243[3], or L245[3] and L247[3]
6 Chosen from Fr L439[3] and L445[3] or L447[3], or L441[3] and L445[3] or L447[3]
6 Chosen from Fr L259[3] and L269[3], or L261[3] and L267[3], or L269[3], or L396* and L267[3] or L269[3]
30 History credits:
18 Chosen from Hist L206[6], L250[6], L266[6], and two Honours Seminars
12 Hist chosen from: L450[6], L452[6], L454[6]
6 Elective credits in French or History
6 Hist L492[6] or Fr L498[6]

**NOTE: Fr L396 counts for 3 credits in Quebec Literature, and the other 3 credits count as electives. (see note on Literature § 51.12.2)*

60 BA Honours in History

Year I
6 Hist L201[3] and L202[3]; or L203[3] and L205[3]
3 Hist L200[3]
9 Hist Elective credits*
Year II
6 Hist Elective credits
12 Hist Honours Elective credits**
Year III
6 Hist L496[6]
6 Hist Honours Elective credits**
6 Hist Elective credits#
6 Hist Elective credits##

NOTE: Students must pass an oral comprehensive examination.

* *Hist credits chosen from Survey or Intermediate courses.*
\# *Hist credits chosen from Survey, Intermediate or Honours courses.*
** *Hist credits chosen from Honours courses.*
\#\# *Credits from an approved course in a related discipline or a History course.*

NOTE: A student may enter the Honours programme after completing two History courses. Students seeking admission to the Honours programme on or after June 1st 1977 will be bound by the Honours requirements outlined in § 16.2.4 of this Calendar. Students who already had Honours status by June 1st 1977 will continue to be governed by the requirements which applied at the date of their admission to the Honours programme.

Of the Honours History courses in the second and third year, one must be in a field other than the tutorial. All students will be assigned a faculty adviser with whom they must consult concerning their selection of courses.

60 BA Specialization in History

48 Hist credits. No more than 30 credits may be at the survey ("200") level, but these must include either Hist L201[3] and L202[3], or Hist L203[3] and L205[3]. The 48 credits must be in at least two different areas as listed under Hist L496[6].
12 credits in a related field or in Hist courses in related fields must be approved as part of the programme *prior to* registration by the student's adviser or the Chairman.

60 BA Specialization in English and History

12 Engl credits chosen from two different periods which should be supported by parallel Hist courses
18 Engl Elective credits
12 Hist credits to parallel Engl courses
18 Hist Elective credits
NOTE: This programme replaces the joint Majors Programme.

36 BA Major in History

Year I
6 Hist L201[3] and L202[3]; or L203[3] and L205[3]
6 Hist Elective credits*
Year II
12 Hist Elective credits#
Year III
12 Hist Elective credits#

* *Hist credits chosen from Survey or Intermediate courses.*
\# *Hist credits chosen from Survey, Intermediate or Honours courses. Choice from Honours courses with permission of instructor only.*

24 Minor in History

24 Hist credits. Students in other departments who wish advice as to those courses most helpful to them may consult the Chairman.

51.16.2 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.5.

INTRODUCTORY SURVEY COURSES

HISTORY L200
The Nature and Practice of History
The course embraces two fundamental concerns. Students will examine the nature of historical enquiry: its varieties, purposes, traditions, and place in contemporary society. In addition, they will receive a systematic introduction to the practical aspects of critical scholarship: the use of the library, methods of research, and forms of writing critical essays. (3 credits)

HISTORY L201
Introduction to European History, 1400—1789
A survey of the history of Europe from the Renaissance to the French Revolution with emphasis on the development of ideas and political institutions. (3 credits)

HISTORY L202
Introduction to European History, 1789—present
A survey of the history of Europe from the French Revolution to the present with emphasis on the development of ideas and political institutions. (3 credits)

HISTORY L203
History of Canada, Pre-Confederation
A survey of Canadian history, from settlement to Confederation, which emphasizes readings and discussions on selected problems. (3 credits)

HISTORY L205
History of Canada, Post-Confederation
A survey of Canadian history from Confederation to the present, which emphasizes readings and discussions on selected problems. (3 credits)

HISTORY L206
History of Quebec
Social, economic and political history of Quebec from the origins to the present, with emphasis on the period since 1760. (6 credits)

HISTORY L207
The Indian in Canadian History
Survey of Amerind history from 1500 to the present day. Students will be encouraged to carry on further studies in areas of special interest. (3 credits)

HISTORY L208
(Also given as Interdisciplinary Studies L300)
Native Peoples of Canada
This course examines the Canadian Native experience from a multi disciplinary perspective including history, law, education, the arts, etc. Focusing on Eastern Canada and in particular, Quebec, it attempts to understand the Native experience and contemporary situation. Indians, Inuit and people who work with them are invited to speak on topics related to their special interest. (6 credits)

HISTORY L211
History of the United States, to 1877
Survey of American history from settlement to 1877. The course will deal with the political and economic framework of American history, and with social and cultural trends. (3 credits)

HISTORY L213
History of the United States, since 1877
Survey of American history from 1877 to the present. The course will deal with the political and economic framework of American history, and with social and cultural trends and movements. (3 credits)

HISTORY L219
(Also given as Classics L230)
The Ancient Near East I
A short introduction to the Neolithic Period will be followed by the history of Egypt, with emphasis on economic, political and religious factors. (3 credits)

HISTORY L221
(Also given as Classics L231)
The Ancient Near East II

The purpose of this course is to give a survey of the history of Mesopotamia, Syria, Ancient Israel and the Hittites. Ancient sources will be used whenever possible. (3 credits)

HISTORY L223
(Also given as Classics L240)
Greek History

A survey of Greek history from Minoan-Mycenaean time to the Roman conquest of Greece, viewed primarily through the eyes of contemporaries, emphasizing those issues that have excited and continue to arouse interest and controversy among historians. Though Athens, for its unique cultural and political achievement, inevitably occupies the central interest, due attention will be paid her critics as well as admirers. The credibility of the ancient evidence will be carefully assessed and emphasis will be placed on social and economic as well as political matters. (3 credits)

HISTORY L225
(Also given as Classics L241)
Roman History

A survey of Roman history from 776 B.C. to 476 A.D. viewed primarily through the eyes of contemporaries, emphasizing those issues that have excited and continue to arouse interest among historians. The central interest will inevitably be Rome's administrative genius and imperial successes. Social and economic as well as political data will be considered and the credibility of the ancient evidence will be carefully assessed. (3 credits)

HISTORY L227
(Also given as Classics L264)
An Introduction to Archaeology

Archaeology as a science; its purpose, methods, theories, and techniques. The relationship of Archaeology to Pre-History, Ancient History, Fine Arts, and Anthropology. The Neolithic Revolution and the emergence of the earliest civilizations: Mesopotamia, Egypt, India, and China. The Bronze Age in Crete and in Greece. Most of the course will consist in the presentation, classification, dating, and interpretation of selected artifacts. Some work at the Montreal Museum of Fine Arts. (3 credits)

HISTORY L229
(Also given as Classics L265)
Greek and Roman Art and Archaeology

The archaeology of Greece and Rome with particular attention to painting (especially ceramics), sculpture, and architecture. The concept of "style" in archaeology and in art history and criticism. The works of Exekias and Douris, of Phidias and Praxiteles, and of Iktinos and Kratinos as representative of the "ideal" in Classical Greek Art. Roman Art as Greek and Etruscan derivative as well as evidencing the peculiarly Roman. The falsifications of history and the truth that can be recovered by the archaeologist: Some work at the Montreal Museum of Fine Arts. (3 credits)

HISTORY L230
History of Medieval Europe

A study of Western Europe (France, Germany and Italy with occasional reference to neighbouring areas) during the period 300 to 1300 A.D. The purpose of the course will be to discover the positive meaning of the term "medieval" by an examination of the political and cultural interaction of the Greco-Roman, Judeo-Christian and Germanic traditions, as revealed in primary sources. Reading will be assigned from a number of recent collections of translated contemporary source material which will form the basis for class discussions. Required Reading: C. Warren Hollister, *Medieval Europe.* (6 credits)

HISTORY L235
Renaissance Europe

Will explore the elements of transition from the Medieval to the Modern World. Particular attention to changing social and moral values (as expressed in art, literature and social behaviour) and to the growth of nation states in Europe. (3 credits)

HISTORY L237
History of the Reformation

A study of the religious, social and political doctrines of the age of the Reformation. Emphasis on the Medieval and Renaissance origins of Reformation ideas, and on the ways in which this era has proven seminal for the development of modern Western civilization. (3 credits)

HISTORY L240
History of England, 1485 to the Present

Emphasis on the development of English society and political structure, with some attention to religious, cultural, and economic development as well. (6 credits)

HISTORY L250
The Ancien Regime, 1660-1789

Prerequisite: History L201 and L202 or its equivalent. A historical survey of this period and a study of selected themes and problems: the cultural and political supremacy of France; the strength and weakness of absolute government as seen in the reign of Louis XIV; the resurgence of the nobility; unrest and social and economic reform; contemporary appraisals of the ancien regime. (6 credits)

HISTORY L254
The World Since 1914

Prerequisites: History L201 and L202 or its equivalent. A discussion of the main trends of world history—political, diplomatic, socio-economic and cultural—since World War I. Special attention will be given to European developments. (6 credits)

HISTORY L258
History of Modern Italy

Prerequisites: History L201 and L202 or its equivalent. Survey of the history of modern Italy. Emphasis will be placed on the Risorgimento, the crisis of liberal democracy, the rise of fascism and post-war problems. (6 credits)

HISTORY L264
(Also given as German L264)
Germany and Austria in Modern Times

Prerequisites: History L201 and L202 or its equivalent. Socio-economic change and the development of nation-states in German Central Europe from the eighteenth century to the present. For advance reading the student might consult H. Holborn, *A History of Modern Germany.* (6 credits)

HISTORY L266
France since 1815

Prerequisites: History L201 and L202 or its equivalent. A study of French history since the defeat of Napoleon, with special emphasis on social and intellectual developments. (6 credits)

HISTORY L268
History of Russia
Prerequisites: History L201 and L202 or its equivalent. Survey of the history of Russia from the origins to the present, with emphasis on the Russian Revolution of 1917 and the Soviet period. (6 credits)

HISTORY L272
A History of China
In the first term the course will examine the evolution of Chinese society from approximately 2000 B.C. to the Nineteenth Century A.D., stressing the development of political and social structures, the dynastic cycle, and early contacts with the West. In the second term the Western challenge to China in the modern period will be considered, the nature of this penetration, its effects, and the reaction to it in the form of the rise of nationalism and the victory of communism. (6 credits)

HISTORY L273
A History of Modern Japan
The course will consider the impact of Western civilization and technology on Japan in the 19th and 20th centuries. (3 credits)

HISTORY L275
A History of Modern India
The course will consider the impact of Western civilization and technology on India in the 18th, 19th and 20th centuries. (3 credits)

HISTORY L278
An Introduction to the History of North and West Africa in the 19th and 20th c.
This course will focus on the relationship between western imperialism and indigenous political, economic, social and religious developments from c. 1800 to c. 1960. Students will be encouraged to consider specific themes such as the development of the indigenous working class, the role of local entrepreneurs and the place of local élites in the process of change. (6 credits)

HISTORY L280
An Introduction to the History of Central, South and East Africa in the 19th and 20th centuries
This course will focus both on the origins and development of indigenous African trade and politics and on those of the European settler societies. Emphasis will be placed on the effects on African societies of the development of the European and Afrikaaner-dominated mining and agricultural economies. The theme of African political resistance will especially be stressed. (6 credits)

HISTORY L281
(Also given as Political Science L355)
The Middle East in World Politics
May be taken either as a History or a Political Science course. Islamic Heritage: Nationalism, Zionism and Contemporary Problems (Arab-Israeli Conflict: U.S.A.-U.S.S.R. Power Struggle). (3 credits)

HISTORY L283
(Also given as Political Science L357)
Mid-East Political Systems
May be taken either as a History or a Political Science course. A comparative study of a selected number of Mid-East Governments (Turkey, Egypt, Libya, Syria, Iraq, Lebanon, Israel, Jordan, Saudi Arabia and Yemen). (3 credits)

HISTORY L291
Selected Topics in History
Content will depend on the theme designated by the department, which varies from year to year. (6 credits)

HISTORY L292
Selected Topics in History
A student may repeat History L291, provided that the content is different, by registering for credits under History L292. (3 credits)

INTERMEDIATE COURSES

These courses cover geographical or thematic specialties beyond the level presented in the introductory courses. Greater stress is placed on student participation in discussions than on lectures. Prerequisites are normally required.

HISTORY L302
Approaches to Canadian History
Prerequisite: Canadian history survey at CEGEP or university. Canadian history as seen by propagandists, rebels, reactionaries and poets. Students will be expected to read widely. (6 credits)

HISTORY L303
Interpretations of Canadian History
Prerequisite: Canadian survey. Canadian History has been seen in many different ways—as part of British History, as a rejection of Britain, as a struggle between exploiters and exploited. This course examines the leading interpretations and the reasons for their differences. (3 credits)

HISTORY L304
Protest Movements in Canada since Confederation
Prerequisite: Canadian history or political science survey. An examination of the social and intellectual origins of political protest in Canada since 1867. Topics will include agrarian revolt, labour organization and sectional discontent, with emphasis on such third parties as Canada First, Progressive Party, C.C.F., Social Credit, Union Nationale and Parti Québecois. (6 credits)

HISTORY L305
The Ideology of French Canada
Prerequisite: Any Canadian history at CEGEP or university. A study of the ways in which francophone Canadians have seen their societies and their roles in Canada. While the course will emphasize the francophones of Quebec, some time will be spent on those who live in such other parts of Canada as New Brunswick and the West. (3 credits)

HISTORY L307
History of Montreal
Prerequisite: Any Canadian history at CEGEP or university. A study of the origins of the city, its role in the Empire of the St. Lawrence, and its rise to metropolitan dominance in Canada. Special emphasis on economic development and on ethnic groupings. (3 credits)

HISTORY L309
History of the Canadian North
Prerequisite: Any Canadian history at CEGEP or university. An intense study of the advance of the northern frontier of Canada, with emphasis on the period 1840-1945. The course will stress exploration, problems of sovereignty, conflict of cultures, and economic development. (3 credits)

HISTORY L310
American Social and Intellectual History

Prerequisite: American survey. The course will deal with the origins and development of social institutions, colonial, regional and national economics, class structure, popular culture, literature, ideas and myths in the United States. First term covers from settlement to Civil War, second term from Civil War to present. (6 credits)

HISTORY L311
The United States in the 20th Century: 1900-1941

Prerequisite: American survey. An examination of the political, economic, social and cultural trends and conflicts from the beginning of the Twentieth Century to World War II. (3 credits)

HISTORY L313
The United States in the 20th Century: 1941 to Present

Prerequisite: American survey. An examination of the political, economic, social, and cultural trends and conflicts from World War II to the present. (3 credits)

HISTORY L316
History of Women in England and North America

Prerequisite: Permission of instructor. Thematic and issue-oriented discussion of the problems in women's history in North America since 1800. A comparative examination of the women's movement in Canada, the U.S. and England, with emphasis on the myth of womanhood and the realities of the legal, economic and social position of women. (6 credits)

HISTORY L317
Canada Views the United States

Prerequisite: Canadian survey. An examination of Canadian attitudes to the United States from 1776 to the present, with respect to both specific incidents and general trends. Emphasis will be placed on the discussion of primary source material. (3 credits)

HISTORY L319
A Literary History of Twentieth-Century Canada

Prerequisite: Canadian survey. An examination of some of the major themes of Canadian history in the 20th century as seen by Canadian novelists, English and French. Themes studied will include the struggle for survival; regional, ethnic and religious plurality; and the response to urbanization and industrialization. (3 credits)

HISTORY L324
(Also given as Classics L346)
Continuity and Change: An Intellectual History of the Late Roman Empire

Prerequisite: Permission of instructor. A study of the main intellectual and social forces in the late Roman Empire that contributed most significantly to the formation of European culture. Among those topics treated will be: Neo-Platonism, Gnosticism, the Greek and Roman system of education, government and private welfare policies, mystery religions, late Judaism, early Christianity, the religious policy of pagan and Christian Emperors, contemporary art and architecture. (6 credits)

HISTORY L330
Readings in Medieval History

Prerequisite: Survey course or permission of instructor. This course will consist of discussion periods using translated primary source materials taken from standard collections. Outside reading will also be required. Term papers will be assigned, and mid-term tests will be given. (6 credits)

HISTORY L331
Comparative Renaissances in the Western Tradition

Prerequisite: Permission of instructor. A colloquium on selected renaissances, including the 12th Century European Renaissance, the Italian Renaissance of the fourteenth and fifteenth centuries, the American Renaissance of the nineteenth century and possibly the Irish Renaissance of the same century. Students will use literary as well as more traditional historical sources to explore such questions as: what is a cultural "renaissance"? What forms help to create a cultural renaissance? How have traditional societies reacted to the phenomenon of cultural renaissances? Emphasis on discussion and research papers rather than lectures in a formal sense. (3 credits)

HISTORY L333
Comparative Counter-Cultures in the Western Tradition

Prerequisite: Permission of instructor. A colloquium on selected counter-cultural movements, including the medieval counter-cultural tradition, the Anabaptists of the 16th century, the English counter-cultures of 1649-1660. These classic movements will then be contrasted with such modern movements as the literary and artistic counter-culture of Gertrude Stein's Paris, the social counter-culture of the 19th century North American communal movement, and finally the counter-cultures in the same society in the past decade. Through a variety of sources, including literary and artistic, students will explore the nature of counter-cultural movements in the context of traditional societies. (3 credits)

HISTORY L346
History of British Diplomacy

The course will attempt to ascertain and evaluate the guiding principles of Britain's foreign policy as they are illustrated by practice in the nineteenth and twentieth centuries. The study will embrace the struggle to maintain the balance of power within Europe, the acquisition of Empire, British involvement in the Great War, the period between the wars, with special reference to the League of Nations, and British policy since World War II with special reference to the Cold War, devolution of Empire, and the European Economic Community. Certain aspects of contemporary international relations theory may also be discussed. There will be frequent seminars. (6 credits)

HISTORY L350
Problems in Church and State in Modern Europe

An examination of some of the important themes in Church and State relations in Europe with emphasis on Early Modern Europe. Some of the themes to be discussed are: the changing theory in church and state relations; the growth of secularization; the development of the notion of religious tolerance; established churches and social unrest. (6 credits)

HISTORY L351
Social History of Seventeenth Century Europe

Prerequisite: History L201 or L202 or its equivalent. A study of social trends in seventeenth-century Europe with emphasis on the

elements of tradition and transition in institutions, classes, and orders. (3 credits)

HISTORY L353
Social History of Eighteenth Century Europe

Prerequisite: History L201 or L202 or its equivalent. A study of social trends in eighteenth-century Europe with emphasis on the elements of tradition and transition in institutions, classes, and orders. (3 credits)

HISTORY L355
History of Ireland

A survey course that traces the history of Ireland from 432 to the present. Emphasis will be on the 19th and 20th centuries. Special attention will be given to the development of Irish nationalism and relations with Great Britain. Irish music and literature will be used to supplement the historical perspective. (3 credits)

HISTORY L358
19th Century Civilization seen through the Novel

Prerequisites: History L201 and L202 or its equivalent, or permission of instructor. An examination of the major currents in 19th century European history as seen in the novels of such writers as Dickens, Balzac, Stendhal, Dostoevsky, Flaubert and Zola. (3 credits)

HISTORY L359
20th Century Civilization seen through the Novel

Prerequisites: History L201 and L202 or its equivalent, or permission of instructor. A study of the main themes in contemporary history as expressed in the novels of such writers as Remarque, Malraux, Hamsun, Solzhenitsyn, Pasternak, Camus, and Mailer. (3 credits)

HISTORY L361
Europe and the Industrial Revolution: The Origins of Modern Society

Prerequisites: History L201 and L202 or its equivalent. An examination of change and stability in the social and economic structure of Europe during the first age of industrialization, c. 1760 to c. 1900. (3 credits)

HISTORY L363
European Society and Economy in the Twentieth Century: The Crisis of Capitalism

Prerequisites: History L201 and L202 or its equivalent. An examination of stability and change in the social and economic structure of Europe in the contemporary age. (3 credits)

HISTORY L364
Nazism and Fascism

Prerequisites: History L201 and L202 or its equivalent, or History L264. Emphasis will be on an analysis of the origins and policies of the National Socialist movement in Germany. The course will also deal with fascistic political movements in Italy, Austria, Hungary, and Rumania. For advance reading the student might consult K. Bracher, *The German Dictatorship* and S. Woolf (ed.), *The Nature of Fascism.* (6 credits)

HISTORY L371
Colonialism and Neo-Colonialism in Africa

Prerequisite: African survey course or permission of instructor. A study of the liberation movements in Guiné, Angola, Mozambique, Rhodesia and Namibia. (3 credits)

HISTORY L373
Africa and the Caribbean

Prerequisite: African survey course or permission of instructor. The African origins of the people of the West Indies, the slave trade, and the modern history of the Caribbean Islands will be studied. (3 credits)

HISTORY L374
Industry and Empire

This course will investigate the nature of capitalist imperialism as it emerged in the nineteenth century by a study of Great Britain and her colonial world. The course will begin with a study of British economy and society itself so that we may see the changes brought about by the Industrial Revolution. Then we will look at the forms of British domination, formal and informal, and finally we will examine some of the theories that have risen to explain the connection between industrialization and imperialism. (6 credits)

HISTORY L390
(Also given as Philosophy L390)
Philosophy of History

Prerequisite: Second or third year standing in a History programme, or permission of the Philosophy Department. An analysis of the nature of historical knowledge and explanation will be followed by a study of classical and contemporary attempts to elucidate the meaning of history. Authors discussed include Augustine, Vico, Kant, Hegel, Marx, Spengler, Popper, Toynbee. (6 credits)

HISTORY L392
History of Education

Prerequisite: University II or III level or permission of instructor. A survey of the History of Education from the Greeks to the present day. (6 credits)

HISTORY L397
Independent Study Programme

See Department Chairman for further information. (3 credits)

HISTORY L399
Independent Study Programme

See Department Chairman for further information. (3 credits)

ADVANCED SEMINARS: HONOURS COURSES

The following courses are open to Honours students in all departments. History Majors and students Majoring in other departments may take these courses with the permission of the instructor, provided they have completed an introductory course in the same area.

HISTORY L402
Problems in Canadian Intellectual History

Prerequisite: Canadian survey. A study of social and political thought, with emphasis on nationalism in both English and French Canada. (6 credits)

HISTORY L404
The City in Canadian History

Prerequisite: Canadian survey. A study of urban development. For the first term, study will be devoted to world urban history. In the second term, study will concentrate on urban history in Canada. Students will have an opportunity to carry out original research in areas of interest to them. (6 credits)

HISTORY L406
Canada in the 1920's and 1930's

Prerequisite: Canadian survey. The course will examine many facets of Canadian life, economic, political, social and intellectual, during the inter-war decades. Emphasis will be on individual research projects. (6 credits)

HISTORY L408
Problems in Canadian Social History

Prerequisite: Canadian survey. A seminar and research course in Canadian social history. Topics to be studied will include sports, religion, morality, architecture and poverty. Classes will meet for discussion based on papers prepared by students. Students will also prepare a major paper based on original research. (6 credits)

HISTORY L410
Problems in American History

Prerequisite: American survey. An intensive study of themes in recent American history, emphasis on historiography, social and intellectual history. (6 credits)

HISTORY L420
(Also given in alternate years as Classics L448)
Julius Caesar and Alexander the Great

Prerequisite: Ancient history course. May be taken either as a History or Classics course. Three centuries separate them, perhaps history's greatest field marshals, reformers, and visionaries, two men more than all others loved, despised, admired, and condemned by contemporaries and posterity alike. This course will seek to discover them as they were, the worlds they conquered, and what Alexander and Caesar wanted and planned their worlds to be. (6 credits)

HISTORY L422
(Also given in alternate years as Classics L449)
Human Beginnings: The Stone Ages

May be taken either as a History or a Classics course. The origin of man and man's place in evolution and in nature, Man the toolmaker: australopithecines, homo habilis, homo erectus, Peking man, Java man, Solo man, and others. The fossil evidence and taxonomic problems. Man the hunter: meat-eating, intelligence, and sexual differentiations. Territoriality and aggression. The struggle for existence and the survival of the fittest: Darwinism, Marxism, and sociology. Palaeolithic cultures: Abbevillean, Acheulean, Clactonian, and Mousterian. Neanderthal and Cro-Magnon mixtures? Man the artist. From Perigordian to Magdalenian. Epipalaeolithic and Mesolithic societies. The Neolithic revolution. Stone Age cultures of today. Importance and relevance of prehistory. Homo ludens. (6 credits)

HISTORY L430
Priesthood and Politics in the Middle Ages

Prerequisite: Intermediate course in Medieval history or permission of instructor. A study of the working out in practice, in the relations between the holders of temporal and spiritual power, of the medieval concepts of *sacerdotium* and *imperium*. (6 credits)

HISTORY L442
Tudor England

Prerequisite: English history survey. A study of the political, religious and social problems of the Tudor Age (1485-1603). The seminar will consist of regular discussions and individual research papers, centered around the broad themes of the age. It is hoped that students will be able to use primary as well as secondary sources. (6 credits)

HISTORY L444
Religious Dissent and Social Protest in the English tradition, 1530-1660

Prerequisite: English history survey. Examination of the Dissenting religious groups in the English tradition, including the Lollards, Puritans, Presbyterians, Baptists, Quakers, etc., and their impact on society and social protest movements. (6 credits)

HISTORY L446
Stuart England

Prerequisite: English history survey. A study of the political, social, and religious problems of the Stuart Age, with an emphasis on the era from the accession of James I (1603) to the Glorious Revolution of 1688-9. (6 credits)

HISTORY L450
The Enlightenment: 18th Century Intellectual History

Prerequisite: Early Modern European survey. A study of the European Enlightenment with emphasis on its development in France. The main themes in the movement will be explored, e.g., nature, reason, tolerance, progress, happiness, etc.; the careers of the leading philosophers and their chief writings will be examined. Various reactions to the Enlightenment in the eighteenth and nineteenth centuries will be studied. (6 credits)

HISTORY L452
The French Revolution and Napoleon

Prerequisite: Introductory survey course in 18th or 19th century Europe. An examination of the socio-economic, political and religious changes in French society between 1787 and 1815. (6 credits)

HISTORY L454
The Revolutionary Tradition in 19th Century France

Prerequisite: French history or Modern European. An analysis of the revolutions of 1848 and 1871. (6 credits)

HISTORY L460
Studies in 19th Century Central Europe: The Era of Bismarck

Prerequisite: Survey in German history or nineteenth century Europe. An analysis of socio-economic change and the growth of nationalism in the Habsburg and Hohenzollern states during the age of Bismarck. (6 credits)

HISTORY L462
Studies in 20th Century Central Europe: Fascism and Communism

Prerequisite: Survey in German history or twentieth century Europe. Problems in the modernization of the socio-economic and political order in Central and Eastern Europe following the dissolution of the Habsburg and Hohenzollern empires. Special attention will be paid to the role of fascism and communism in promoting social change. For advance reading students might consult R. Dahrendorf, *Society and Democracy in Germany*, and H. Seton-Watson, *Eastern Europe. 1918-1941.* (6 credits)

HISTORY L464
Problems in the Socio-economic History of Modern Europe

Prerequisite: Introductory survey course in 19th and 20th century Europe. Selected themes in the evolution of industrial society in Europe:

social stratification, urbanization and its effects, social mobility and changing composition of elites. The course will focus mainly on England and Central Europe in the nineteenth and twentieth centuries. (6 credits)

HISTORY L470
East Asia To-Day (China, Japan and Hong Kong)

Prerequisite: Chinese and/or Japanese survey course. In the first term the seminar will deal with the revolution in China since 1949; in the second term the seminar will study developments in either Japan or Hong Kong since World War II. (6 credits)

HISTORY L472
South Asia Today (India and Vietnam)

Prerequisite: Some knowledge of Indian and Chinese history. In the first term the seminar will deal with issues in Indian politics, society, economy and diplomacy since Independence in 1947 — the nation's problems and prospects. In the second term the seminar will study the Vietnamese people's struggle for freedom since World War II, and will contrast conditions of life in North and South Viet Nam. (6 credits)

HISTORY L476
Imperialism and Revolution in the Third World

Prerequisite: Asian and African survey courses or permission of instructor. A comparison of the techniques and effects of imperialism in Asia, Africa and Latin America during the late 19th and 20th centuries. Modern independence and revolutionary movements in these areas will be examined from a comparative perspective. (6 credits)

HISTORY L490
Joint History-English Tutorial

A tutorial conceived as an interdisciplinary effort between the Departments of History and English, and designed specifically to satisfy a requirement for the History-English joint Honours program. Tutorials may be arranged with members of the respective departments. (6 credits)

HISTORY L492
Joint History-French Tutorial

Prerequisite: Permission of instructor. A tutorial conceived as an interdisciplinary effort between the Departments of History and Etudes Françaises and designed specifically to satisfy a requirement for the History-French joint Honours program. Tutorials may be arranged with members of the respective departments. (6 credits)

HISTORY L493
Advanced Topics in History

This course focuses on advanced topics of interest in History. Content will depend on the theme designated by the Department, which varies from year to year. (6 credits)

HISTORY L494
Advanced Topics in History

A student may repeat History L493, provided that the content is different, by registering for credits under History L494. (3 credits)

HISTORY L495
Special Studies
(6 credits)

HISTORY L496
Honours History Tutorial

The history tutorial is open to Honours students only. All Honours students in History must select an area of concentration from the list below, and a tutorial director. The tutorial director will supervise an intensive reading programme in the student's area of special interest, and consult with the student individually to discuss his reading programme.
—01 North American History
—02 British History
—03 Ancient History
—04 European History, 400-1660
—05 European History, 1660 to the present
—06 The Third World
(6 credits)

HISTORY L498
Honours History Thesis

Optional project open to Honours students only. At the end of the second year students must choose, in consultation with their tutorial director, a research topic for intensive analysis during the third year. The student will independently research the topic and present a paper at the end of the third year. Students may concentrate in the same areas of concentration as for History L496. (6 credits)

51.17 Centre for Interdisciplinary Studies

Director
DR. M.G. HOGBEN
(Assistant Professor, Chemistry Department)
Assistant Director
DR. L. HALLETT
(Assistant Professor, English Department)

OBJECTIVES:

To accept the challenge implicit in living in a world where specialization can so easily be synonymous with narrowness of vision. This narrowness can be overcome if the specialist is able to see the interconnection between all fields of endeavor. Interdisciplinary Studies attempts to integrate knowledge, providing the specialist with a perspective which his discipline alone cannot give. Our primary aim, therefore, is to work with specialists and specialization rather than to provide a substitute for them.

1. We hope to achieve this objective through individual *courses* in Interdisciplinary Studies which are of high academic quality and are offered to students on an elective basis.

2. This process of integration can also be achieved through a *Minor*, i.e., 24 credits in a particular field which may be complementary to an existing Major, Specialization or Honours Programme. Such a Minor permits a more exhaustive treatment of an area than does an individual course, and may entail taking courses offered through Departments in addition to one or more seminars in Interdisciplinary Studies.

3. We must also construct *programmes* which constitute 'neglected areas' of curriculum, neglected because they do not fit neatly into any one department. Many of these programmes concern areas which have become important recently, i.e., after the evolution of the more traditional disciplines. Thus we have programmes in Canadian Studies and in Recreation and Leisure Studies. This objective is achieved through the coordination of existing courses in departments together with one or more seminars in Interdisciplinary Studies. Each programme will have its own coordinator and counselling service.

4. We hope to assist those students whose areas of interest, although truly academic, are not catered to in any single department or programme. A Self-Elected Specialization programme has been designed whereby a student may, in close consultation with the Director of Interdisciplinary Studies and other qualified faculty, submit his own programme consisting of ten existing courses from various departments. Care is taken that such programmes constitute a coherent whole both by the selection of courses and by the possible addition of a tutorial whereby the student in question integrates his knowledge under the direction of one faculty member. Students are accepted into a Self-Elected Specialization programme only after the Centre is satisfied that no other department can adequately cater to his academic aspirations.

NOTE: Students should register with the Centre for Interdisciplinary Studies if they intend to pursue any of the following programmes or Minors.

51.17.1 CANADIAN STUDIES PROGRAMME

Coordinator:
DR. G. DECARIE *(History)*

The Canadian Studies programme seeks to give students a better understanding of the diverse origins and multi-faceted character of Canada.

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1.

The superscript indicates credit value.

Selection Rules

1. Hist L203[3] and L205[3] or History L206[6]
2. Eng L352[6] or English L233[3] and L235[3].
3. 6 credits in French language at a level to be determined by the French Department, section de langue, from the following list:
   If a student is placed at the elementary level—Fr L200[6], L201[6] or L202[6].
   If a student is placed at the intermediate level—Fr L303[6], L305[6].
   If a student is placed at the advanced level—Fr L336[6].
4. Geog L342[6] Geography of Canada.

5. Canadian Studies Seminar Int St L411[3] and L413[3]. In each 3-credit course two professors from different disciplines discuss a common Canadian theme or problem with students.
   In addition all students will be required to take Int St L212[6]: Introduction to the Methods of the Humanities and Social Sciences.

Requirements for a BA with Specialization in Canadian Studies (Interdisciplinary Studies)

Courses totalling 60 credits selected from the list of Courses with Canadian Content incorporating the five selection rules listed above.

Requirements for a BA with a Major in Canadian Studies (Interdisciplinary Studies)

Courses totalling 42 credits selected from the list of courses with Canadian Content incorporating the five selection rules listed above.

Requirements for a BA with a Minor in Canadian Studies (Interdisciplinary Studies)

To be taken supplementary to a Major, Specialization or Honours in another department.

Courses totalling 24 credits selected from:

1. History L203[3] and L205[3] or History L206[6].
2. English L352[6] or English L233[3] and L235[3].
3. 6 credits from any discipline other than History or English.
4. *Canadian Studies Seminar* Int St L411[3] and L413[3]. In each 3-credit course, two professors from different disciplines discuss a common Canadian theme or problem with students.

COURSES WITH CANADIAN CONTENT

For a complete course description see the appropriate section.

Communication Studies § 51.8.3
- L316[3] The Canadian Cinema
- L467[6] Broadcasting Policy in Canada

Economics § 51.10.3
- L338[6] Contemporary Economic Issues
- L414[6] Economic History of Canada
- L440[6] Economics of Social Welfare

English § 51.11.3
- L352[6] Introductory Survey of Canadian Literature (Major and Honours)
- L233[3] Canadian Literature I
- L235[3] Canadian Literature II
- L236[6] Canadian Criticism, Thought and Controversy
- L487[3] Advanced Studies in Canadian Literature I

Etudes Françaises § 51.12.3
- L213[3] Québec literature in translation I
- L215[3] Québec literature in translation II
- L259[3] Littérature québécoise: le roman I
- L261[3] Littérature québécoise: le roman II
- L263[3] Poésie, théâtre et conte français du Québec: Le patriotisme littéraire
- L265[3] Poésie, théâtre et conte français du Québec: Voix de l'homme et du monde
- L267[3] Poésie et théâtre français du Québec: L'interrogation spirituelle et charnelle
- L269[3] Poésie et théâtre français du Québec: Voix du pays réinventé
- L396[6] Littérature comparée
- L471[3] Civilisation Française: ses rapports avec le Québec
- L473[3] Essai et civilisation de Québec
- L477[3] Histoire et mouvement des idées au Québec

Geography § 51.13.3
- L326[3] Historical Geography of North America
- L342[6] Geography of Canada
- L349[6] Geography of Northern Lands

History § 51.16.2
- L203[3] History of Canada—Pre-Confederation
- L205[3] History of Canada—Post-Confederation
- L206[6] History of Quebec
- L207[3] The Indian in Canadian History
- L208[6] Native Peoples of Canada
- L302[6] Approaches to Canadian History
- L303[3] Interpretations of Canadian History
- L304[6] Protest Movements in Canada Since Confederation
- L305[3] The Ideology of French Canada
- L307[3] History of Montreal
- L309[3] History of the Canadian North
- L317[3] Canada Views the U.S.
- L319[3] A Literary History of Twentieth-Century Canada
- L402[6] Problems in Canadian Intellectual History
- L404[6] The City in Canadian History
- L406[6] Canada in the 1920's and 1930's.

Interdisciplinary Studies § 51.17.9
- L226[6] Alienation—English and French Canadian Literature
- L300 The Native Peoples of Canada
- L311[3] Selected Topics in Canadian Studies
- L313[3] Selected Topics in Canadian Studies
- L411[3] Canadian Studies Seminar I
- L413[3] Canadian Studies Seminar II

Political Science § 51.23.3
- L220[6] Canadian Government and Politics
- L320[6] Parties, Pressure Groups and Public Opinions
- L324[6] An Introduction to Law and the Canadian Constitution
- L328[6] Public Administration
- L373[3] Nationalism, The Canadian Experience
- L420[6] Seminar on Quebec Government and Politics

L424[6] Seminar on Canadian Federal, Provincial and Municipal Governments

Sociology § 51.25.3
L202[6] Canadian Society
L204[6] Quebec Society
L310[6] Social Movements in Quebec
L327[3] Sociology of Labour and Capital in Quebec
L404[6] Sociology of Economic Change in Quebec

Theology § 51.26.3
L468[3] Canadian Church History: Pre-Confederation
L469[3] Canadian Church History: Post-Confederation

Representatives

Communication Studies	M. Gervais
Economics	M. Islam
English	E. Cameron
Etudes Françaises	A. Lauzière
Geography	R. Duffy
History	M. Vipond
Political Science	E. Price
Sociology	S. Hlophe
Theology	M. Durley

51.17.2 RECREATION AND LEISURE STUDIES

Coordinator: PROF A. WRIGHT (Bio-PE)

DR. B. M. PETRIE *(Sociology)*

Recreation and leisure service is a basic social and cultural need, and is concerned with the interrelationships among people in their environment. A great deal of money is poured into recreation and leisure at all governmental levels, leading to a pressing need for people to administer and develop programmes at the necessary standards of sophistication.

This programme attempts to fulfill this need and is offered to those students interested in a career in recreation and leisure services together with those students who foresee the increasing academic enquiry into the problems derived from recreation and leisure within the work ethic.

The primary focus is on managing, programming, counselling and coordinating rather than instructing. The programme draws from the departments of Bio-Physical Education, Etudes Françaises, Interdisciplinary Studies, Psychology, Sociology and the Faculty of Commerce and Administration.

Requirements:

Both required and elected courses within the Social Science and Applied Recreation options should be chosen in consultation with the coordinator.

Additionally it will be required that students must maintain a 65% average in all courses in the programme in order to continue into the second and third year of their studies.

Representatives:

Bio-Physical Education	A. Wright
Commerce	P. Brunet
Interdisciplinary Studies	M. Hogben
Philosophy	C. Gray
Psychology	E. Mouledoux
Sociology	B. M. Petrie

Upon completion of all requirements the student will receive a BA with Specialization in Recreation and Leisure Studies (Interdisciplinary Studies).

RECREATION AND LEISURE STUDIES PROGRAMME

Programme Outline

I Recreation and Leisure Foundation
(All Compulsory)
Bio-PE L241[3]
Bio-PE L342[6]
Bio-PE L426[6]
Bio-PE L464[6]
Int St L343[3]
Int St L460[6]
Phil L210[6]

6 credits in French language at a level to be determined by the French Department, *section de langue,* from the following list: If a student is placed at the elementary level—Fr L200[6], L201[6], L202[6].
If a student is placed at the intermediate level—Fr L311[3] must be taken first and followed by one of: Fr L305[6], L309[3] or L306[6].

Total credits 42

II Social Science Component
(Choose either A, B, or C)

A	B	C
Sociology	*Psychology - 1*	*Psychology - 2*
Soc L201[3]	Psyc L200[6]	Psyc L200[6]
L203[3]	or L202[6]	or L202[6]
or L205[3]	L203[3]	L203[3]
L300[6]	L205[3]	L205[3]
12 credits	12 credits	12 credits
From L213[3]	From L204[6]	From L212[6]
L302[6]	L206[6]	L215[3]
L304[6]	L302[6]	L313[3]
L400[6]	L306[6]	L314[3]
L402[6]		
Total Credits 24	24	24

III Applied Recreation Component
(Choose X or Y)*

X	Y
Administration	Recreation Programming
24 credits from:	24 credits from:
Econ L209[3], L210[3]	Bio-PE L211[3]
Man C213[3]	Bio-PE L213[3]
Man C266[3]	Bio-PE L261[3]

Mark C213[3]	Bio-PE L310[6]
Mark C350[3]	Bio-PE L333[3]
Acc C213[3]	Bio-PE L370[6]
Acc C218[3]	Bio-PE L401[3]
Fin C314[3]	Bio-PE L412[6]
Fin C315[3]	Bio-PE L455[3]
Total Credits 24	24

NOTE: Psychology L202 is a prerequisite for any Psychology '300'-Level Course.

The Social Science Component (C) is strongly recommended for students choosing the Applied Recreation Component (Y).

**For course descriptions*
X refer to § 61
Y refer to § 51.5.3

DOUBLE MAJOR IN RECREATION AND LEISURE STUDIES AND EITHER PSYCHOLOGY OR SOCIOLOGY

Programme Outline: 93 credits

42 1. Major in Psychology or Sociology
51 2. Major in Recreation and Leisure Studies

A. Foundation. 27 credits

Bio-PE L241[3]	Recreation and Leisure in Contemporary Society
Bio-PE L342[6]	Principles and Practices of Recreational Services
Bio-PE L426[6]	Organization and Administration
Bio-PE L464[6]	Recreation Internship
Phil L210[6]	Philosophy of Man

B. Applied Recreation Component: (Choose X or Y)

X Administration
24 credits from:

Econ L209[3]	Introduction to Micro-economics
Econ L210[3]	Introduction to Macro-economics
Man C213[3]	Management: Theory & Practice
Man C266[3]	Foundations of Behaviour
Mark C213[3]	The Marketing Process (Introductory)
Mark C350[3]	Marketing Management
Acc C213[3]	Financial I
Acc C218[3]	Managerial I
Fin C314[3]	Introduction to Finance I
Fin C315[3]	Introduction to Finance II

Y Recreation Programming
24 credits from:

Bio-PE L211[3]	Introduction to Motor Learning
Bio-PE L213[3]	Motor Learning and Human Performance
Bio-PE L310[6]	Methods and Materials In Physical Education and Recreation
Bio-PE L333[3]	Personal and Community Health Problems
Bio-PE L370[6]	Scientific Foundations of Outdoor Education
Bio-PE L401[3]	Adapted, Physical Education and Recreation
Bio-PE L412[6]	Advanced Methods and Materials
Bio-PE L455[3]	Preventive Medicine and Geriatrics

51.17.3 SELF-ELECTED SPECIALIZATION PROGRAMME

Coordinators:
DR. M. HOGBEN *(Chemistry) AND* DR. L. HALLETT *(English)*

Requirements leading to a Bachelor of Arts with a "self-elected" Specialization in . . . *"title of chosen specialization"* . . . (Interdisciplinary Studies)

Students may apply to pursue a Self-Elected Specialization by submitting in writing a statement of the proposed programme. There is no limitation on the subject matter of the proposal. The proposal should, however, contain the following information:
a) a title of proposed area of specialization,
b) a personal statement of purpose in taking such a programme,
c) a list of ten or more courses directly related to the title and totalling 60 credits over a three-year period.

This proposal should be submitted to the Director of Interdisciplinary Studies as early as possible before registration. It will then be examined by a committee of Faculty from the general area of the student's interest. Students submitting proposals less than a month before registration may be admitted by the Director on a holding basis but this implies no guarantee of any later acceptance of a programme.

The following guidelines should help students in constructing a valid set of courses in the area of their Specialization.

1. The title or theme of the proposed area of Specialization must be interdisciplinary, i.e., it must contain a coherent perspective that cuts across at least three traditional disciplines.
2. A student must maintain a 70% average in those courses proposed in setting up the programme. Failure to meet this requirement will prohibit the student from entering the second and third years of study.
3. The programme must include at least four courses (24 credits) falling within a single discipline — hereafter called the foundation discipline. These courses must include some of the "core" courses towards a Major in that discipline. This practice is not only sound pedagogy but has added significance in that a student failing to maintain a 70% average can then transfer to the department of the foundation discipline and still continue towards a Major or Specialization in that field.
4. The final year, the student must enroll in L450 (6 credits), the Self-Elected Specialization Tutorial.

All students will be required to take Int St L212, Introduction to the Methods of the Humanities and Social Sciences.

Requirements leading to a Bachelor of Science with a "self-elected" Specialization in . . . *"title of chosen specialization"*. . . (Interdisciplinary Studies)

1. Normal entrance requirements to Pure and Applied Science programmes.

2. Programme requirements: The same regulations as the Self-Elected Specialization BA degree.
30 credits must be in Pure Science courses and the remaining 30 credits must be Science-related courses. All courses must be approved by the Director.

51.17.4 MINOR IN ENVIRONMENTAL SCIENCE

Coordinator: To be announced.

There is a growing awareness of the vital necessity to understand man's relationship to and effect upon the environment. This Minor would enable the student to deepen both his social concern and his scientific understanding of the problems involved.

Environmental courses already exist in Biology, Chemistry, Geography and Interdisciplinary Studies.

Requirements:

Bio 331A[3]	Environmental Biology I
Chem 411B[3]	Environmental Chemistry (Prerequisite: Chemistry 210Z[6])
Geog L275[3]	Climate and the Biosphere
Geol 202B[3]	Elementary History of the Earth, or
Geol 205A[3]	Environmental Geology
Int St L230[6]	Environmental Studies I (taken in first or second year)

Plus 6 credits from:

Bio 333B[3]	Environmental Biology II
Chem 541A[3]	Nature and Analysis of Pollutants (Prerequisites: Chem 342A and 344B)
Geog L375[6]	Biogeography (Prerequisites: Geog L200 or L275 and L276)
Geol 207A[3]	Geology of Resources
Geol 221B[3]	Physical Oceanography

After completion of all requirements the students will, on graduation, receive on their transcripts "Minor in Environmental Science (Interdisciplinary Studies)."

It is to be understood that Science students will be exempted from the required courses in their own discipline. They must make up these credits in courses outside their own discipline from the optional courses.

51.17.5 MINOR IN MEDIEVAL STUDIES

Coordinator:
R. COOLIDGE *(History)*

The purpose of this programme is to give students a broad knowledge of the middle ages as a period in which many of the most important ideas, institutions, value systems, and modes of creative expression in Western civilization arose and developed significantly toward their present forms. Students will be encouraged to relate the insights of various disciplines to each other and to gain an environmental view of human experience in this period.

Requirements:
1 Selection of 18 credits dealing with the Medieval World from at least two departments other than that of the student's Honours or Major Programme. This selection will be made in close consultation with the Coordinator. Such courses may be selected from the following list:

For a complete course description see the appropriate section.

Classics § 51.7.2
L346[6] Continuity and Change: An Intellectual History of the Late Roman Empire
L392[6] Late Latin

English § 51.11.3
L402[6] Anglo-Saxon
L405[3] Middle English
L407[3] Chaucer I
L409[3] Chaucer II
L410[6] Medieval Literature
L412[6] Masterpieces of English Literature written before 1603

Etudes Françaises § 51.12.3
L430[6] Littérature du moyen âge

History § 51.16.2
L230[6] History of Medieval Europe
L330[6] Readings in Medieval History
L430[6] Priesthood and Politics in the Middle Ages

Interdisciplinary Studies § 51.17.9
L321[3] Selected Topics in Medieval Studies
L323[3] Selected Topics in Medieval Studies

Italian § 51.20.3
L330[3] Dante
L331[3] *Divina Commedia*
L340[3] Petrarch and Early Italian Poetry
L341[3] Boccaccio and the Novella

Philosophy § 51.21.3
L410[6] History of Medieval Philosophy
L480[6] Author Course (Medieval Authors only)

Political Science § 51.23.3
L293[3] Roman, Medieval, and Renaissance Philosophy

Spanish § 51.20.3
L400[3] The High Middle Ages
L401[3] The Late Middle Ages

Theological Studies § 51.26.3
L463[3] Religion and Society in the Early Middle Ages
L464[3] Religion and Society in the Later Middle Ages

2 Participation in Medieval Studies Seminar (Int St L420[6]) in third year.

Representatives:

Classics	S. Casey
English	A. Hooper
English	R. Monaghan
English	M. Philmus
English	R. Wareham
Etudes Françaises	G. Laurion
History	R. Coolidge
Modern Languages	A. Costanzo
Modern Languages	H. Famira
Modern Languages	J. Macaluso
Philosophy	E. Joos
Theology	M. Durley

After completion of all requirements the students will, on graduation, receive on their transcripts "Minor in Medieval Studies (Interdisciplinary Studies)".

51.17.6 MINOR IN "SOCIAL RESPONSIBILITY IN SCIENCE"

Coordinator:
J. CRELINSTEN

This programme is concerned with developing an awareness of the social and moral dimensions of Science. It is designed for Arts students who wish to examine the role of science as a potent social force, and for Science students who find it necessary to understand the social context of their discipline. The programme coordinates Social Studies of Science and Technology with studies of their practical applications.

Requirements:
Selection of 24 credits or their equivalent from the following groups: (in close consultation with the coordinator)
For a complete course description see the appropriate section.

A. *At least 6 credits from:*

Int St L236[6]	The Technological Society
Int St L264[6]	Scientists and the State
Int St L270[6]	Science and the Arts, a dialogue: "Three Quarks for Muster Mark"
Int St L290[6]	Introduction to Futures Studies
Int St L361[3]	Selected Topics in Social Responsibility in Science
Int St L363[3]	Selected Topics in Social Responsibility in Science
Phil L330[6]	Philosophy of Social Science

B. *At least 6 credits from:*

Int St L230[6]	Environmental Studies I
Bio 331A[3]	Environmental Biology I
Bio 333B[3]	Environmental Biology II
Bio 434Z[6]	Ecology
Chem 441B[3]	Environmental Chemistry
Chem 541A[3]	Nature and Analysis of Pollutants
Comp Sc 301[3]	Computers in Society

C.

Int St L360[6]	Science and Cultural Crisis

Representatives:

Chemistry	R. Pallen
History	M. Mason
History	R. Porter
Interdisciplinary Studies	J. Crelinsten
Interdisciplinary Studies	M. Hogben
Philosophy	D. O'Connor
Physics	C. Kalman
Sociology	S. Drysdale

After completion of all requirements the students will, on graduation, receive on their transcripts "Minor in Social Responsibility in Science (Interdisciplinary Studies)".

51.17.7 MINOR IN THIRD WORLD STUDIES

Coordinator:
L. EVOY

The Third World Studies Programme aims at encouraging and integrating interest in Asia, Africa and Latin America. Courses relating to these areas are offered in History, Political Science, Sociology, Geography, Economics and Interdisciplinary Studies at the Loyola Campus of Concordia.

Requirements:
Students enroled in the programme will be required to take an introductory course, Interdisciplinary Studies L250, together with 18 credits selected from at least two of the disciplines listed below.

For a complete course description see the appropriate section.

Interdisciplinary Studies § 51.17.9
L250[6] An Introduction to the Third World
L351[3] Selected Topics in Third World Studies
L353[3] Selected Topics in Third World Studies
L350[6] Third World Studies Seminar

Economics § 51.10.3
L307[3] The Chinese Economy
L401[3] Theories of Economic Growth
L403[3] Planning for Economic Growth

Geography § 51.13.3
L344[6] The Third World
L348[6] The Geography of the Far East

History § 51.16.2
L272[6] History of Modern China
L273[3] History of Modern Japan
L275[3] History of Modern India
L278[3] History of North and West Africa
L280[6] History of Central, South and East Africa
L371[3] Colonialism and Neo-Colonialism in Africa: Struggles for Liberation in Africa
L373[3] Africa and the Caribbean
L470[6] East Asia Today
L472[6] South Asia Today (India and Vietnam)
L476[6] Imperialism and Revolution in the Third World

Political Science § 51.23.3
L341[3] Contemporary Politics of China
L343[3] Contemporary Politics of Japan
L350[6] African Government and Politics
L355[3] Middle East in World Politics
L357[3] Mid-East Political Systems
L380[6] Politics of Developing Areas

Sociology § 51.25.3
L321[3] Sociology of Economic Development
L462[6] Topical Seminar in Capitalism and Underdevelopment in Africa and Latin America

Representatives:

Geography	R. Duffy
Interdisciplinary Studies	L. Evoy
Economics	S. Alvi
Economics	D. Otchere
History	M. Mason
History	R. Porter
Political Science	H. Habib
Political Science	K. Oh
Political Science	F. Stark
Sociology	S. Hlophe
Sociology	J. Tresierra

After completion of all requirements the students will, on graduation, receive on their transcripts "Minor in Third World Studies (Interdisciplinary Studies)".

51.17.8 MINOR IN WOMEN'S STUDIES

Coordinator:
A. FURLONG

This programme consists of courses dealing with the status, participation and problems of women in Western culture. The courses include such concerns as women in the arts, literature, history, the family and society. The aims of the programme are to introduce the student to the study of women and to offer some background for those who will work in institutions and occupations concerned with women.

Requirements:

The Minor consists of a selection of 18 credits offered in the programme in consultation with the coordinator. In addition, the Third-Year Interdisciplinary Seminar is required of all students in their senior year. All courses are also open to students who are not taking the complete Minor.

For a complete course description see the appropriate section.

Interdisciplinary Studies § 51.17.9
L221[3] Women in Christianity
L307[3] Selected Topics in Women's Studies
L309[3] Selected Topics in Women's Studies
L314[3] Women in Modern Society I
L315[3] Women in Modern Society II
L441[3] Seminar in Women's Studies I
L442[3] Seminar in Women's Studies II

Classics § 51.7.2
L254[6] Women in Classical Antiquity

English § 51.11.2
L237[3] Women in Literature I
L239[3] Women in Literature II

History § 51.16.2
L316[6] History of Women in England and North America

Sociology § 51.25.3
L406[6] Sociology of Women

Representatives

Interdisciplinary Studies	A. Furlong
Chemistry	M. Baldwin
Classics	L. Sanders
Communication Studies	G. Valaskakis
English	E. Cameron
English	K. Waters
History	G. Decarie
Sociology	S. Drysdale
Theology	M. Durley

After completion of all requirements the students will, on graduation, receive on their transcripts "Minor in Women's Studies (Interdisciplinary Studies)".

51.17.9 COURSES IN INTERDISCIPLINARY STUDIES

All students are invited to take courses in Interdisciplinary Studies. There are no prerequisites unless otherwise stated.

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.5.

INTERDISCIPLINARY STUDIES L201
(Also given as Chem 300Z)
Concepts in Science

Prerequisites: None. An elective course for students outside the science discipline who perceive that a lack of science background may alienate them from much of the world's activities and writing. The aim of the course is to learn the fundamental principles and concepts within the physical sciences: heat, light, atomic structure; chemical principles; Newtonian versus quantum mechanics; relativity; life; the universe and its structure. Emphasis will be placed upon understanding the nature of science, applying the principles to the practical disciplines of astronomy and photography. Mathematicization will be kept to a minimum. *Lectures:* 3 hours per week for two terms plus occasional labs. (6 credits)

INTERDISCIPLINARY STUDIES L204
Aesthetics: An Interdisciplinary Approach

This course attempts to bring together a number of areas central to the cultural climate of our time, with emphasis on aesthetics, that is; man's encounter with the creative arts. The course examines the relation of aesthetics generally (and art in particular) to the crisis in values, and to contemporary identity crisis. More specifically, artistic questions such as the meanings and functions of style, taste and criticism; the questions of form and content, subjectivity and objectivity in art; and the comparison of different artistic media, are integrated with the broader issues remarked above. The course's format is lecture and discussion with the use of slides, recordings and films as illustrative material. *Lectures:* 3 hours per week for two terms. (6 credits)

INTERDISCIPLINARY STUDIES L212
Introduction to the Methods of the Humanities and Social Sciences

This course will introduce students to representative methods used in the humanities and social sciences. Methodologies suitable to each discipline will be shown through examples and projects centred upon themes with Canadian content where possible. Instruction will be shared by the professors from the disciplines concerned. *Lectures:* 3 hours per week for two terms. (6 credits)

INTERDISCIPLINARY STUDIES L220
Comparative Literature (6 credits)

INTERDISCIPLINARY STUDIES L221
(Also listed as Theology L221)
Women in Christianity

A study of the theological and historical roles of women in Christianity. The course will examine female prototypes and images of women in the Old and New Testaments, Fathers of the Church, canon law, mediaeval theology, the Reformation and modern theology. It will also treat the roles of prominent women in the history of Christianity. *Lectures:* 3 hours per week either term. (3 credits)

INTERDISCIPLINARY STUDIES L224
(Also given as French L396)
Littérature comparée—Comparative literature. Littératures canadiennes—Canadian literatures

L'étude comparée des littératures canadiennes d'expression française et d'expression anglaise. Existe-t-il une seule littérature canadienne dans les deux langues, ou, en réalité, y a-t-il deux littératures séparées au Canada? Comparative study of French and English Canadian Literature. Is there only one literature in two languages or has Canada produced two distinct and separate literatures? *Textes—Texts:* Grove, *Settlers of the Marsh;* Ringuet, *Trente arpents;* MacLennan, *The Watch that Ends the Night;* Langevin, *Poussière sur la ville;* Laurence, *Rachel, Rachel;* Davies, *Fifth business;* Carrier, *La guerre, Yes Sir!;* Cohen, *Beautiful Losers;* Bessette, *Incubation;* Hébert, *Kamouraska.* (6 crédits)

INTERDISCIPLINARY STUDIES L226
Alienation—English and French Canadian Literature

The theme of "alienation" as it appears in English and French Canadian Literature will be explored through the poetry and fiction of both languages. The course will consist of lectures in English, lectures in French and joint seminars in which both professors and students will discuss the relationship between the two cultures. A minimal knowledge of both languages is required (many texts are translated). *Lectures:* 3 hours per week for two terms. (6 credits)

INTERDISCIPLINARY STUDIES L230
Environmental Studies

The course is designed to provide a general background to the scientific and sociological study of man's relationship to his environment. Each lecture will attempt an in-depth treatment of a specific aspect issue; and will be presented by an invited specialist in that field. The course will present an overall view of the general problems followed by a serious analysis of specific areas of concern, such as the pollution of water, air and soil; noise pollution; the oceans; energy resources and population. Possible solutions for the restoration and preservation of our environment will be discussed and the associated social, political and economic considerations will be presented. The general content of the lectures, where applicable, will be directed to problems in our city and province. The presentation of material will include lectures, discussion groups, films and panel discussions. Readings on the various topics will be assigned and students will be involved in projects and term papers. *Lectures:* 3 hours per week for two terms. (6 credits)

INTERDISCIPLINARY STUDIES L233
(Also listed as Economics L333)
Economics of the Environment

Prerequisite: Economics L209 and L210 or equivalent. This course will be devoted to an examination of the economic aspects of current environmental problems. Topics will include: economy, ecology, and the environment; economic growth and the environment; the circular flow of economic activity and spaceship earth; private costs and social costs; market failure, externalities, and collective goods; fiscal instruments and pollution; an evaluation of federal and provincial policies. *Lectures:* 3 hours per week either term. (3 credits)

INTERDISCIPLINARY STUDIES L236
The Technological Society

The purpose of this course is to familiarize the student with the characteristics of contemporary society which specifically relate to the large-scale application of technology and to appreciate the historical uniqueness of these characteristics. The course will concentrate on four main areas:

1. *What is technology!* Science as technique. Organization as technique. Machines as tech-

nique. Social planning as technique. Technology and social change.
2. *Historical Studies* Agrarian Revolution, Medieval Technology and Feudalism, Industrial Revolution, Development of Economics.
3. *Comparative Studies* Technology under American Capitalism and Soviet Communism, developed countries and "Third World" nations, national commitments to technological growth, multi-national corporations.
4. *Problems of Technology* Technological backlash (e.g., pollution from industry), Doomsday theories, uncontrolled growth, alternative futures. *Lectures:* 3 hours per week for two terms. (6 credits)

INTERDISCIPLINARY STUDIES L250
An Introduction to the Third World

While this course is designated to provide an interdisciplinary background to students enrolled in the Third World Studies Programme, it is open to all students, irrespective of faculty. *Lectures:* 3 hours a week for two terms. (6 credits)

INTERDISCIPLINARY STUDIES L264
Scientists and the State:
Issues in Science and Politics

The advent of two scientific concepts, Evolution and Atomic Energy, will be examined in detail. The course will be divided into three parts: 1. The advent of Darwinian Theory, 2. The New Physics from 1900 to the present, 3. The Current Soviet Dissent.

The first two parts will comprise a history of the science and intellectual climate of the time, a study of the basic scientific principles, and a look at specific related topics. The third part will examine the domination over research and teaching in science by political systems. In particular, the current dissent of Soviet scientists, e.g., Z. Medvedev and A. Sakharov will be investigated. *Lectures:* 3 hours per week for two terms. (6 credits)

INTERDISCIPLINARY STUDIES L270
Science and the Arts, a dialogue: "Three Quarks for Muster Mark"

A course for Science and Arts students which will attempt to elucidate the interaction between scientific and cultural developments throughout history and in the present day. Using works by various philosophers, scientists and creative writers, we will trace the continuing dialogue between science and the arts and its relevance for man's attitude toward himself and his world. *Lectures:* 3 hours per week for two terms. (6 credits)

INTERDISCIPLINARY STUDIES L272
Astronomy, Cosmology and the Space Age

Although it deals descriptively with a specific science, namely astronomy, it is interdisciplinary in nature as it also uses the history and methodology of astronomy to examine such areas as the history of ideas, interaction between science and established beliefs, and methodology of science. Previous courses in science are not necessary. Topics will include: Motions of the sky; The Solar System; structure and evolution of the stars; galactic astronomy; radio astronomy; pulsars, quasars and "black holes"; cosmology; the historical development of ideas of the universe; history of the calendar; the search for, meaning and implications of, extra-terrestial life. *Lectures:* 3 hours per week for two terms. (6 credits)

INTERDISCIPLINARY STUDIES L290
Introduction to Future Studies

Prerequisite: Second or third year standing. The course is designed to develop a reasoned awareness of alternative futures. The course approaches the future from four perspectives: the futures as possible, as probable, as preferential, and as practicable. A considerable emphasis is placed on the study of the person as a responsible innovator and inventor of the future(s). (6 credits)

INTERDISCIPLINARY STUDIES L300
(Also listed as History L208)
The Native Peoples of Canada

This course examines the Canadian Native experience from a multidisciplinary perspective, including history, law, education, culture, etc. Focusing on Eastern Canada and in particular, Quebec, it attempts to understand the Native experience and contemporary situation. Indians, Inuit and people who work with them are invited to speak on topics related to their special interest. *Lectures:* 3 hours per week for two terms. (6 credits)

INTERDISCIPLINARY STUDIES L307
Selected Topics in Women's Studies

This course focuses its attention on one or more aspects of the Women's Studies programme. The theme and methodology chosen will depend upon the background and interests of the instructor. Students are advised to consult the Interdisciplinary Studies Centre before registering in order to be sure of the title of the course in any one session. *Lectures:* 3 hours per week. (3 credits)
NOTE: Students who receive credit for L307 may take it again as L309, provided that a different topic is dealt with the second time.

INTERDISCIPLINARY STUDIES L311
Selected Topics in Canadian Studies

This course focuses its attention on one or more aspects of the Canadian Studies programme. The theme and methodology chosen will depend upon the background and interests of the instructor. Students are advised to consult the Interdisciplinary Studies Centre before registering in order to be sure of the title of the course in any one session. *Lectures:* 3 hours per week. (3 credits)
NOTE: Students who receive credit for L311 may take it again as L313, provided that a different topic is dealt with the second time.

INTERDISCIPLINARY STUDIES L314
Social Change: Women in Modern Society I

An interdisciplinary course designed to survey some of the major theories on women's role in society. The specific discipline emphasized will vary from year to year depending upon the background of the instructor. *Lectures and/or seminars:* 3 hours per week for one term. (3 credits)

INTERDISCIPLINARY STUDIES L315
Social Change: Women in Modern Society II

An interdisciplinary course designed to survey some of the major theories on women's role in society. The specific discipline emphasized will vary from year to year depending upon the background of the instructor. *Lectures and/or seminars:* 3 hours per week second term. (3 credits)

INTERDISCIPLINARY STUDIES L321
Selected Topics in Medieval Studies

This course focuses its attention on one or more aspects of the Medieval Studies pro-

gramme. The theme and methodology chosen will depend upon the background and interests of the instructor. Students are advised to consult the Interdisciplinary Studies Centre before registering in order to be sure of the title of the course in any one session. *Lectures:* 3 hours per week. (3 credits)
NOTE: Students who receive credit for L321 may take it again as L323, provided that a different topic is dealt with the second time.

INTERDISCIPLINARY STUDIES L331
Selected Topics in Environmental Studies

This course focuses its attention on one or more aspects of the Environmental Studies programme. The theme and methodology chosen will depend upon the background and interests of the instructor. Students are advised to consult the Interdisciplinary Studies Centre before registering in order to be sure of the title of the course in any one session. *Lectures:* 3 hours per week. (3 credits)
NOTE: Students who receive credit for L331 may take it again as L333, provided that a different topic is dealt with the second time.

INTERDISCIPLINARY STUDIES L343
Sociology of Leisure
(Also listed as Sociology L343)

. Prerequisite: Sociology L201 or permission of the instructor. Second year course, compulsory for Recreation students and elective for all students. This course deals with Leisure and Recreation in the context of industrial-urban social structures. It entails a sociological approach to the analysis of leisure and recreational activities as affected by contemporary social, economic, and political institutions. Critical emphasis shall be placed on the historical changes in leisure as a social reality with particular attention to the structural properties of alienation, anomie and inequality in modern social and cultural milieux. *Lectures:* 3 hours per week for one term. (3 credits)

INTERDISCIPLINARY STUDIES L350
Third World Studies Seminar

Prerequisite: Open only to students in their second or third year or to post-graduate students. This seminar will deal with one or other special aspects of the Third World on a comparative basis. *Lectures:* 3 hours per week for two terms. (6 credits)

INTERDISCIPLINARY STUDIES L351
Selected Topics in Third World Studies

This course focuses attention on some aspects of development and tradition in the Third World. The theme and methodology chosen will depend upon the background and interests of the instructor. Students are advised to consult the Interdisciplinary Studies Centre before registering in order to be sure of the content of the course in any one session. *Lectures:* 3 hours per week. (3 credits)
NOTE: Students who receive credit for L351 may take it again as L353, provided that a different topic is dealt with the second time.

INTERDISCIPLINARY STUDIES L360
Science and Cultural Crisis

This course will attempt to develop a framework for responding to problems posed by recent and projected achievements in the sciences, especially the life sciences. Our thesis is that scientific break-throughs have precipitated a crisis, or series of crises, with respect to man's self-understanding, his relations to his fellow man, and his relations with nature. Our aim will be to understand the historical and intellectual roots of these crises and to formulate responses which grow out of scientific-philosophic dialogue. Topics will include: Objectivity: scientific, philosophic; Alienation and the "two cultures"; DNA and being human; Death with dignity; Biogenetic engineering; the "right" to privacy; the difficulty of dialogue. *Lectures:* 3 hours per week for two terms. (6 credits)

INTERDISCIPLINARY STUDIES L361
Selected Topics in Social Responsibility in Science

This course focuses its attention on one or more aspects of the Social Responsibility in Science programme. The theme and methodology chosen will depend upon the background and interests of the instructor. Students are advised to consult the Interdisciplinary Studies Centre before registering in order to be sure of the title of the course in any one session. *Lectures:* 3 hours per week. (3 credits)
NOTE: Students who receive credit for L361 may take it again as L363, provided that a different topic is dealt with the second time.

INTERDISCIPLINARY STUDIES L391/L393
Selected Topics in Interdisciplinary Studies

The theme and methodology chosen will depend upon the background and interests of the instructor. Students are advised to consult the Interdisciplinary Studies Centre before registering in order to be sure of the title of the course in any one session. *Lectures:* 3 hours per week either term. (3 credits each)

INTERDISCIPLINARY STUDIES L411
Canadian Studies Seminar I

Prerequisite: Enrolment in Canadian Studies Programme. An interdisciplinary seminar in which professors from two of the following disciplines will discuss together some themes or problems central to Canadian life: Communication Studies, Economics, English, Etudes Françaises, History, Political Science, Sociology, Geography, Fine Arts, Theological Studies. *Lectures:* 3 hours per week first term. (3 credits)

INTERDISCIPLINARY STUDIES L413
Canadian Studies Seminar II

Prerequisite: Enrolment in Canadian Studies Programme. Same format as Canadian Studies Seminar L411, but involving two other disciplines from the same list. *Lectures:* 3 hours per week second term. (3 credits)

INTERDISCIPLINARY STUDIES L420
Medieval Studies Seminar

Prerequisites: 12 credits in different departments within the Minor. The seminar will be designed to coordinate the student's work in the field of Medieval Studies, both within and outside their Major or Honours programmes, and to broaden their knowledge of the Middle Ages, with the cooperation of the various departments involved in the programme. *Lectures:* 3 hours per week for two terms. (6 credits)

INTERDISCIPLINARY STUDIES L441
Seminar in Women's Studies I

Prerequisite: Open to all third year students. This is an interdisciplinary seminar on selected themes related to women in society, utilizing the perspectives of a number of academic disciplines. The emphasis is on independent study. *Lectures:* 3 hours per week first term. (3 credits)

INTERDISCIPLINARY STUDIES L442
Seminar in Women's Studies II

Prerequisite: Permission of the instructor. This is a continuation of the interdisciplinary seminar Int St L441 on selected topics related to women in society. *Lectures:* 3 hours per week second term. (3 credits)

INTERDISCIPLINARY STUDIES L450
Self-Elected Specialization Tutorial

Prerequisite: For Self-Elected Specialization students in their final year. This tutorial is directed by a faculty member from a field of studies relevant to the student's programme. He will be chosen by the Director of the Centre for Interdisciplinary Studies in consultation with the student concerned. The tutorial Director will supervise an intensive reading programme and assist the student in the preparation of a paper. The tutorial is intended to bring together the various fields of knowledge included in the student's programme. (6 credits)

INTERDISCIPLINARY STUDIES L460
Recreation and Leisure Studies Seminar

Prerequisite: Enrolment in the final year of Recreation and Leisure Studies Programme. This is a third-year interdisciplinary seminar in which students can tie together all they have learned in the Recreation and Leisure Studies Programme. Additionally, students will be set on a course of study that should continue after they graduate so that they can keep up with future developments in this area. *Lectures:* 3 hours per week for two terms or equivalent time in independent study. (6 credits)

INTERDISCIPLINARY STUDIES L491/L493
Advanced Topics in Interdisciplinary Studies

The theme and methodology chosen will depend upon the background and interests of the instructor. Students are advised to consult the Interdisciplinary Studies Centre before registering in order to be sure of the title of the course in any one session. *Lectures:* 3 hours per week either term. (3 credits each)

51.18 Library Studies

Coordinator:
ANNE M. GALLER

Assistant Coordinator:
CATHRIN CAMPBELL

51.18.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequences must be read in conjunction with § 51.1.

The superscript indicates credit value.

36 BA Major in Library Studies

Year I
12 Libr L201[3], L202[3], L320[3], L325[3]
Year II
15 Libr L303[3], L305[3], L331[3], L333[3], L345[3]
Year III
6 Libr '400' level Elective credits
3 Libr L495[3]

66 Certificate in Library Studies

30 Libr L201[3], L202[3], L303[3], L305[3], L320[3], L325[3], L331[3], L333[3], L345[3], L495[3]
6 Libr '400' Level Elective credits
30 Libr Elective credits

NOTE: Degree students must take Library L201 and L202 as prerequisites to all other Library courses. The thirty-six (36) credits pertaining to Library Studies in the Certificate Programme must be completed in their entirety.

51.18.2 LIBRARY STUDIES

Library Studies Programme offers a *Major in Library Studies* to those who wish to pursue a career in library work at a non-graduate level. For those interested in taking advanced studies at the Master's level a Double Major will be necessary. (36 credits are required in Library Studies for a Major.)

All new applicants must be interviewed by the coordinator or assistant coordinator. Appointments may be made at the Library Studies Office, Vanier Library, Room V-125. All students must pre-register with the Programme and obtain course approval prior to the date of registration.

Students will be expected to maintain an average of 65% throughout the Programme.

The *Certificate in Library Studies* is offered to meet the needs of students who may not wish to fulfill the requirements of a Bachelor of Arts degree. All courses in the Programme are 3-credit courses. Sixty-six (66) credits are required to complete the Certificate Programme, thirty-six (36) of which consist of Library Studies with thirty (30) credits of academic electives.

Prerequisites To All Other Courses

Library L201 - Principles of Library Service
Library L202 - The Organization of Library Services

Required Courses

Library L303 - Informations Services
Library L305 - Bibliographic Searching
Library L320 - Cataloguing and Classification Part I
Library L325 - Cataloguing and Classification Part II
Library L331 - Data Processing and Automation
Library L333 - Technical Skills - Multi-Media Operations
Library L345 - Technical Skills - Collection Control

Electives

Library L374 - Selected Topics in Library Studies
Library L376 - Selected Topics in Library Studies
Library L407 - Research Methodology
Library L411 - Library Service and Work with Children
Library L421 - Library Service and Work in Schools
Library L432 - Library Service and Work in the College and University
Library L435 - The Organization of Audio visual Collections
Library L441 - Library Service and Work in Business and Industry
Library L451 - Library Service and Work in The Public Library

Library L461 - Library Service and Work with the Young Adult
Library L465 - Records Management
Library L466 - Archives Management
Library L478 - Advanced Topics in Library Studies
Library L480 - Advanced Topics in Library Studies

Final Required Course

Library L495 - Practice Work

Recommended Academic Electives

Fr L317 and L318 - French for Library Studies
Andragogy L209 - Personal Interrelations

51.18.3 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.5.

LIBRARY L201
Principles of Library Service

This course, which is the prerequisite to all others in the programme, attempts to lay the groundwork for the development of sound supportive staff in libraries. The effective use of the library, its basic tools and terminology, the skills and duties required of the library technician in the library organization and the objectives of library service in different types of libraries, will be introduced as they relate to the principles of librarianship required to provide service to users. Text: Bloomberg, Marty: *Introduction to Public Services for Library Technicians* (Littleton, Libraries Unlimited, 1972) (3 credits)

LIBRARY L202
The Organization of Library Services

Prerequisite: Library L201. Having acquired a basic knowledge of library resources, books, pamphlets, periodicals, documents and media; the processes required for their control, ordering, indexing, classification, cataloguing and circulation will be introduced and practised. Combined with L201, the student is prepared to consider a professional career in library science or further course work. Text: Bloomberg, Marty and Evans: *Introduction to Technical Services for Library Technicians* (Littleton, Libraries Unlimited, 2d ed, 1974) (3 credits)

LIBRARY L303
Information Services

Prerequisites: Library L201 and L202. The course will examine the basic informational services given in all types of libraries relating to book and non-book materials. Standard general reference works will be studied to enable the student to work under a professional librarian in the Information Services Department of a library. Text: Katz, William: *Introduction to Reference Work, V.1., Basic Information Sources* (New York: McGraw-Hill, 2d ed, 1974) (3 credits)

LIBRARY L305
Bibliographic Searching

Prerequisites: Library L201, L202, L303. This course will provide a broad introduction to bibliographic searching. General and subject bibliographies as well as indexes and directories will be studied to enable the student to use the library's resources effectively. Procedures relating to verifying and searching will be studied in detail as they relate to ordering, cataloguing, and inter-library loans. The mechanics of literature searching in any subject field will be introduced. The main emphasis in this course will be on the study of bibliographical sources to enable the student to work in a library as a bibliographical searcher. Text: Katz, William: *Introduction to Reference Work, V. 1, Basic Information Sources* (New York: McGraw-Hill, 2d ed, 1974) (3 credits)

LIBRARY L320
Cataloguing and Classification, I

Prerequisites: Library L201 and L202. This course is designed to give the student a basic knowledge of book and serial cataloguing. Coverage includes: Pre-cataloguing routines, the composition of catalogue cards, and descriptive cataloguing. Weekly laboratory sessions, assignments and readings are required. A knowledge of typing is essential. (3 credits)

LIBRARY L325
Cataloguing and Classification, II

Prerequisites: Library L201, L202, and L320. This course is designed to give the student who possesses a thorough understanding of descriptive cataloguing a basic knowledge of and ability to assign classification numbers and subject headings. Sears and Library of Congress subject headings and the Dewey Decimal classification systems will be studied in depth; the Library of Congress classification system to a lesser extent. (3 credits)

LIBRARY L331
Data Processing and Automation

Prerequisites: Library L201 and L202. A basic introduction to the use of computers and a systems approach in solving library problems. Students will receive instruction in flowcharting and other concepts of systems design and data processing. Automated library applications, services, and networks will be considered. Tours of an automated library and a data centre will provide an insight into the practical application of library automation and the routine technical activities performed by the library staff. No previous knowledge or experience in mathematics, business administration or data processing is required. (3 credits)

LIBRARY L333
Technical Skills—Multi-Media Operations

Prerequisites: Library L201 and L202. This course will be largely practical in nature, giving the student an opportunity to operate audio-visual machinery. He will handle the main types of filmstrips, filmslides, tape recorders, video and other media software found in today's modern library. Practical assignments will allow the student to create a variety of software such as slide tape presentations, transparencies, graphics and filmstrips. (3 credits)

LIBRARY L345
Technical Skills—Collection Control

Prerequisites: Library L201 and L202. The course is designed to provide the student with a thorough understanding of library practices and procedures as related to the acquisition, housing and maintenance of library collections. The student will study different types of circulation control systems and the various circulation functions including loan policies and procedures, inter-library loans, reserves, overdues, statistics, weeding, inventory control and library security. The acquisition, organization, housing,

and maintenance of monographs, serials and uncatalogued collections of material will be examined. The latter includes government publications, technical reports and pamphlets. (3 credits)

LIBRARY L374
Selected Topics in Library Studies

Content will depend on the theme designated by the Programme, which varies from year to year. (3 credits)

LIBRARY L375
Selected Topics in Library Studies

A student may repeat Library L374, provided that the content is different, by registering for credits under Library L375.

LIBRARY L376
Selected Topics in Library Studies

Content will depend on the theme designated by the Programme, which varies from year to year. (3 credits)

LIBRARY L377
Selected Topics in Library Studies

A student may repeat Library L376, provided that the content is different, by registering for credits under Library L377. (3 credits)

LIBRARY L407
Research Methodology

Prerequisites: Library L303 and L305. The aim of this course is to develop an understanding and appreciation of research methods and approaches specific to subject disciplines, based on the consideration of general principles of research methodology and the planning of logical research strategies. The library-oriented approach insures a solid background of data from which problems can be attacked and solutions arrived at. Topics covered in logical progression include: selecting and defining the problem; planning the research programme; developing and testing hypotheses; collecting, classifying, evaluating and analyzing evidence; drawing conclusions; presenting results. Sound knowledge of general reference and bibliographic sources, and those of one academic discipline is assumed. Students will be evaluated principally on a term paper related to research strategy and methods applied to a problem of their own choosing, and class participation.
Text: Batten, Thelma F.: *Reasoning and Research: A Guide for Social Science Methods* (Boston, Little, Brown; 1971) (3 credits)

LIBRARY L411
Library Service and Work with Children

The major kinds of literature for children will be discussed to illustrate the desirable components to be encouraged for the development of reader interest and ability in the young child. The techniques used in the library such as story telling, book talks and graphics will be studied and practised and children's libraries visited and demonstrated. (3 credits)

LIBRARY L421
Library Service and Work in Schools

Prerequisites: Library L201 and L202. The duties and responsibilities of the library assistant in the school, and those of the teacher-librarian, will be discussed including programmes for teaching the use of the library, methods for cooperating with teachers, assembling materials for instructional units, curriculum demands upon the library, and the effects of new curriculum trends in education upon the school library/resource centre. (3 credits)

LIBRARY L432
Library Service and Work in the College and University

Prerequisites: Library L201 and L202. The organization, administration and functions of academic libraries will be studied with special references to curriculum-oriented library service, together with services relating to large academic research libraries and library colleges. (3 credits)

LIBRARY L435
The Organization of Audio-Visual Collections

Prerequisites: Library L320, L325, L333. This course will study audio-visual materials and the tools and aids for their acquisition, cataloguing and maintenance. Descriptive cataloguing and classification of the various audio-visual documents, such as tapes, cassettes, filmstrips, film loops, films, kits and the processing of these materials as well as their storage and circulation will be discussed. (3 credits)

LIBRARY L441
Library Service and Work in Business and Industry

Prerequisites: Library L201 and L202. The role of the library related to its particular business or industry will be examined and the specific skills and devices employed to provide direct information to the users explored. Guest speakers will be invited to illustrate how the library becomes the central source of information within its organization. (3 credits)

LIBRARY L451
Library service and Work in the Public Library

With emphasis on the place of the supportive staff in the development of public libraries in Quebec, their objectives and services will be discussed. Topics such as library legislation, financing, public lending rights and services to the community will be explored. (3 credits)

LIBRARY L461
Library Service and Work with the Young Adult

The course will explore the major phenomena of the teenager's world, his lifestyle, problems and his responsibilities. Some of the skills needed to serve young adults in a library setting will be examined. Literature written especially for young adults, and some adult literature which is especially popular with, and suitable for, young people, will be studied. A pre-course reading list is available. (3 credits)

LIBRARY L465
Records Management

The principles of records administration, of creation, use, maintenance and destruction will be discussed, including storage facilities, records classification, forms, reports control, protection of vital records, and micro-image systems. No previous experience in libraries or business is required. (3 credits)

LIBRARY L466
Archives Management

The principles of archives administration, of creation, use, maintenance and destruction will be discussed, including storage facilities, classification, forms, reports control, protection of vital archives, and micro-image systems. No previous experience in libraries or business is required. (3 credits)

LIBRARY L478
Advanced Topics in Library Studies
This course focuses on advanced topics of interest in Library Studies. Content will depend on the theme designated by the Programme, which varies from year to year. (3 credits)

LIBRARY L479
Advanced Topics in Library Studies
A student may repeat Library L478, provided that the content is different, by registering for credits under Library L479. (3 credits)

LIBRARY L480
Advanced Topics in Library Studies
This course focuses on advanced topics of interest in Library Studies. Content will depend on the theme designated by the Programme, which varies from year to year. (3 credits)

LIBRARY L481
Advanced Topics in Library Studies
A student may repeat Library L480, provided that the content is different, by registering for credits under Library L481. (3 credits)

LIBRARY L495
Practice Work
Upon the completion of all other Library courses, the student will be placed by the Coordinator to gain practical experience in a library system complementary to his interests. Under the supervision of a professional librarian, he will work throughout the system and submit a study of some aspect of the type of library represented. (3 credits)

51.19 Department of Mathematics

Associate Professor and Chairman
J. SORIC

Associate Professors
H. KIM
K. N. MAJUMDAR
A. J. PRILLO
T. N. SRIVASTAVA

Assistant Professors
N. V. BOBETIC
D. KACHROO
A. KEVICZKY
A. RAHN
R. SMITH

51.19.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1.

The superscript indicates credit value.

90 BSc or BA Honours in Mathematics

Year I
3 Math 321A/B^3 or 3 Math Elective credits
18 Math 323A/B^3, 326Z^6, 334Z^6, 353A/B^3
3 Math Elective credits
6 Elective credits
Year II
6 Math 402Z^6
18 Math 325A/B^3, 426Z^6, 436Z^6, 451A/B^3
6 Elective credits
Year III
9 Math 535A/B^3, 551A/B^3, 567A/B^3
15 Math Elective credits
6 Elective credits

90 BSc or BA Specialization in Mathematics

Year I
3 Math 321A/B^3, or 3 Math Elective credits
12 Math 323A/B^3, 334Z^6, 341A/B^3
6 Math Elective credits
9 Elective credits
Year II
18 Math 326Z^6, 353A/B^3, 402Z^6, 451A/B^3
3 Math Elective credits
9 Elective credits
Year III
6 Math 436Z^6
12 Math Elective credits
12 Elective credits

90 BSc Specialization in Statistics (Mathematics)

Year I
3 Math 321A/B^3, or 3 Math Elective credits
15 Math 323A/B^3, 334Z^6, 402Z^6
12 Elective credits
Year II
9 Math 325A/B^3, 341A/B^3, 353A/B^3
9 Math 305A/B^3, 507A/B^3, 509A/B^3
12 Elective credits
Year III
9 Math 407A/B^3, 501A/B^3, 503A/B^3
15 Elective credits in Mathematics, subject to prior approval from the Department
6 Elective credits

90 BSc Specialization in Mathematics & Computer Science

Prerequisites: Math 216, 217, CompSc 211, 241
Year I
6 Comp Sc 341^3, 343^3
18 Math 321A/B^3, 323A/B^3, 334Z^6, 341A/B^3, 343A/B^3
6 Elective credits
Year II
6 chosen from Comp Sc 423^3, 425^3, 427^3, 433^3, 451^3, 551^3 or 561^3
15 Math 326Z^6, 353A/B^3, 402Z^6
9 Elective credits
Year III
6 Comp Sc 424^6
12 Comp Sc Elective credits
6 Math Elective credits
6 Elective credits

42 BSc or BA Major in Statistics (Mathematics)

The following courses in an approved sequence constitute a Major in Statistics.
3 Math 321A/B^3, or 3 Math Elective credits
33 Math 305A/B^3, 323A/B^3, 325A/B^3, 334Z^6, 353A/B^3, 402Z^6, 407A/B^3, 501A/B^3, 503A/B^3
6 Elective credits chosen with prior departmental approval from the following courses:
Comp Sc 241^3, Math 341A/B^3, 405A/B^3, 505A/B^3, 507A/B^3

42 BSc or BA Major in Mathematics

The following courses in an approved sequence constitute a Major in Mathematics

3 Math 231A/B[3], or 3 Math Elective credits

33 Math 323A/B[3], 326Z[6], 334Z[6], 341A/B[3], 353A/B[3], 402Z[6], 436Z[6]

6 Math Elective credits

24 Minor in Mathematics

Four full courses approved by the Mathematics Department constitute a Minor in Mathematics.

51.19.2 DEPARTMENT OF MATHEMATICS

A "Mathematics elective" may be replaced by a course approved by the Department.

Students who intend to follow a Mathematics Programme in University are recommended to take Mathematics 215A/B, 216A/B, 217A/B (Loyola) or Mathematics 103, 203, 105 (CEGEP) at the collegial level.

A student wishing to follow a Mathematics Programme but not meeting these requirements should consult with the Department Chairman.

Students who have taken Mathematics 321A/B (Linear Algebra I) or its equivalent at the collegial level, will have a Mathematics elective (3 credits) in its place. Students without a collegial half course in Linear Algebra take Mathematics 321A/B in University I.

By careful choice of electives, students can select whether the emphasis of the programme will be in the area of Pure Mathematics, Applied Mathematics or Statistics.

The Mathematics Department offers the following courses, Mathematics 213A/B, 214A/B, 215A/B, 216A/B, 217A/B as University credits for non-Science students (excluding Arts students who are following a Mathematics Programme) subject to the approval of each student's Departmental Chairman.

It is possible for a student to take the courses listed in the Honours and Specialization programmes in a sequence different from the one suggested, after obtaining the approval of the Department Chairman.

Students seeking admission to the Honours Honours programme on or after June 1st, 1977 will be bound by the Honours requirements outlined in §16.2.4 of this Calendar. Students who already had Honours status by June 1st, 1977 will continue to be governed by the requirements which applied at the date of their admission to the Honours programme.

51.19.3 COURSE DESCRIPTIONS

MATHEMATICS 200A/B
Ideas in Mathematics

A course for non-Science students. The course endeavours to reveal the extent and power of mathematics and to give some insight into its historical development. The topics chosen will be presented in a way that requires a minimal mathematics background. This course has no formal prerequisites and does not serve as a prerequisite for any other course in Mathematics. Students should consult with the professor before registering for this course. (3 credits) *NOTE A/See § 200.5*

MATHEMATICS 202A/B
Ideas in Mathematics

A course for non-Science students. The course objectives are identical to Mathematics 200A/B but different topics are covered. This course has no formal prerequisites and does not serve as a prerequisite for any other course in Mathematics. Students should consult the department before registering for this course. (3 credits) *NOTE A/See § 200.5*

MATHEMATICS 213A/B
Intermediate Algebra

Numbers, sets, functions, equations, inequalities, matrices and determinants, binomial theorem, exponents, logarithms and analytic geometry of a straight line. (3 credits) *NOTE A/See § 200.5*
NOTE: This course may not be taken for university credit by Mathematics students.

MATHEMATICS 214A/B
Elementary Functions and Analytic Geometry

Prerequisite: Mathematics 213A/B. Exponential and logarithmic functions, circular and trigonometric functions, trigonometric analysis, analytic geometry, circle, parabola, ellipse, hyperbola, mathematical induction. (3 credits) *NOTE A/See § 200.5*
NOTE: This course may not be taken for university credit by Mathematics students.

MATHEMATICS 215A/B
Calculus I

Prerequisites: Functions 521; or Mathematics 213A/B and 214A/B. Limits, continuous functions, derivative, differentiation formulas, chain rule, higher order derivatives, inverse function, applications of derivatives, differentiation of trig, log and exponential functions, antiderivative of the above functions. *Lectures:* 3 hours per week. *Tutorials:* 2 hours per week. (3 credits) *NOTE A/See § 200.5*
NOTE: This course may not be taken for university credit by Mathematics students.

MATHEMATICS 216A/B
Calculus II

Prerequisite: Mathematics 215A/B. The definite and indefinite integrals, applications of integrals, methods of integration, indeterminate forms, improper integrals, series, sequences and tests for convergence. *Lectures:* 3 hours per week. *Tutorials:* 2 hours per week. (3 credits) *NOTE A/See § 200.5*
NOTE: This course may not be taken for university credit by Mathematics students.

MATHEMATICS 217A/B
Vectors and Analytic Geometry

Prerequisites: Functions 521; or Mathematics 213A/B and 214A/B. Translation and rotation of axes, polar coordinates, vectors in the plane, vectors and parametric equations, differentiation of vectors, vectors and solid analytic

geometry, equations of lines and planes, scalar and cross product of vectors, surfaces, spherical and cyclindrical coordinates, introduction to linear algebra. (3 credits) *NOTE A/See § 200.5 NOTE: This course may not be taken for university credit by Mathematics students.*

MATHEMATICS 301A/B
Elementary Statistics

Empirical frequency distributions and descriptive measures; elementary probability; populations, samples, and theoretical distributions; sampling distributions; estimation of confidence intervals; tests of hypotheses; two sample techniques; tests for goodness of fit; regression and correlation; analysis of variance. (3 credits)
NOTE: This course may not be taken for university credit by Mathematics students, or by students taking an equivalent course in another department.

MATHEMATICS 305A/B
Introduction to Discrete Probability Theory

Prerequisite: Mathematics 216A/B, 217A/B or its equivalent. Combinatorial analysis, axioms of probability, conditional probability and independence, discrete probability distributions (binomial, Poisson, geometric, negative binomial, hypergeometric and zeta distributions), expectation, covariance, variance, moment generating function, computing expectation and probabilities by conditioning, evaluation of arguments, occupancy and order problems, Chebyshev's inequality and law of large numbers, central limit theorem and convergence theorems. (3 credits)

MATHEMATICS 307
Mathematics for Elementary School Teachers

A comprehensive course in Mathematics designed for teachers of elementary grades who are responsible for developing ideas of Mathematics with children and for parents interested in the basic concepts and philosophy of the New Mathematics. The course will be a laboratory approach to mathematics content relevant to the elementary grades. Included will be elementary topics from sets, numeration, number operations and properties, geometry and number systems. The development of content will be combined with pedagogical implications through relevant applications to the classroom. This will be accomplished through discussion of learning theories, teaching strategies, consideration and development of various materials of instruction, and evaluative procedures. In general the course will be experimental with participants "doing" as well as "discussing". A wide variety of instructional materials will be utilized and course activity will be oriented toward an awareness of those materials available and their potential for the classroom. (9 credits)
NOTE: The course may be used as 9 credits at the university level except for Mathematics students.

MATHEMATICS 309
Mathematics for Secondary School Teachers

A comprehensive course in Mathematics designed for teachers of secondary school students. The course will be a laboratory approach to the teaching of Mathematics with special emphasis upon the following topics: individualized instruction, teaching the slow learner, the use of media and instructional materials, project-oriented instruction and evaluation. The development of various materials for instruction will be accomplished by the participant of the class and sources of supplementary materials will be made available. A wide variety of instructional materials will be utilized and course activity will be oriented towards an awareness of the materials which are potentially available for use in the classroom. (9 credits)
NOTE: The course may be used as 9 credits at the university level except for Mathematics students.

MATHEMATICS 310Z
Mathematics for the Social and Management Sciences

Prerequisite: Mathematics 213A/B or its equivalent. For non-Science students. Linear programming, progressions, compound interest, permutations and combinations, probability; the derivative, appropriate applications of the derivative, exponential and logarithmic functions, integration with appropriate applications. (6 credits)

MATHEMATICS 311A/B
Elementary Statistics II

Prerequisite: Mathematics 301A/B. Mathematical expectation, curve fitting, statistical inference, inference from small samples, linear regression and correlation, analysis of enumerative data, design of experiments, the analysis of variance, nonparametric statistics. (3 credits)

MATHEMATICS 321A/B
Linear Algebra I

Prerequisite: Mathematics 217A/B or its equivalent. Systems of linear equations, Gauss-Jordan elimination, vectors in n-space, norms, scalar products, matrices, determinants, Cramer's rule, vector spaces, subspaces, linear independence, introduction to linear transformations, matrix representations. (3 credits)

MATHEMATICS 323A/B
Linear Algebra II

Prerequisite: Mathematics 321A/B. Vector spaces, subspaces, bases and dimensions, linear transformations, rank, nullity, inverse, matrix representation, isomorphism, unitary and orthogonal transformation, eigenvalues and eigenvectors, diagonalization process, applications to linear differential equations, Jordan matrices. (3 credits)

MATHEMATICS 325A/B
Linear Algebra III

Prerequisite Mathematics 323A/B. Canonical forms, minimal polynomial, invariant subspaces, Hamilton-Cayley theorem, metric concepts, inner products, isometries, function spaces, orthogonality, bilinear and quadratic forms, symmetric, Hermitian and unitary operators, spectral theorem, complex case. (3 credits)

MATHEMATICS 326Z
Algebra I

Theory of groups, subgroups, first Sylow theorem and normal subgroups. Commutator subgroups. Permutation groups, generated subgroups. Quotient groups and Lagrange's theorem. Homomorphisms, p-groups and the class formula. Elementary properties of rings, integral domains and fields. Ideals and quotient rings. Examples of non-commutative rings. Ring homomorphisms. Polynomial rings and factorization. Field of quotients and other selected topics. (6 credits)

MATHEMATICS 329A/B
Mathematics of Investment
Prerequisite: Mathematics 213A/B and 214A/B or their equivalents, or Functions. Theory of interest; annuities certain; amortization and sinking funds; evaluation of bonds and other investments; depreciation, depletion and capital cost. Brief introduction to life insurance. (3 credits)

MATHEMATICS 332Z
Advanced Calculus
Prerequisite: Mathematics 216A/B, 217A/B or their equivalents. For Chemistry students only. Differential equations; limits and continuity; multiple integrals; Green's, Stokes', Gauss' Theorems; series; improper integrals and Laplace transform. (6 credits)

MATHEMATICS 334Z
Advanced Calculus
Prerequisites: Prerequisite: Mathematics 216A/B, 217A/B or their equivalents. Functions of several variables, limits, continuity, partial derivatives, maxima and minima, extremal problems with constraints, differentiability, Taylor's series, double and triple integrals, curves and surfaces, line and surface integrals, Green's theorem and Stokes' theorem. (6 credits)

MATHEMATICS 341A/B
Numerical Methods I
Prerequisites: Mathematics 216A/B, 217A/B or their equivalents. This course is designed to acquaint students with the standard numerical methods and their mathematical foundations. Topics covered include evaluation of polynomials and their derivatives, polynomial approximations, zeros of functions, systems of linear algebraic equations, matrix inversion. (3 credits) *NOTE A/See § 200.5.*

MATHEMATICS 343A/B
Numerical Methods II
Prerequisite: Mathematics 341A/B. This course is a continuation of Mathematics 341. Topics covered include numerical differentiation and integration, Legendre and Chebyshev polynomials, Gaussian quadrature, numerical solution to differential equations, polynomial approximations. (3 credits) *NOTE A/See § 200.5.*

MATHEMATICS 353A/B
Ordinary Differential Equations I
Prerequisites: Mathematics 215A/B, 216A/B and 321A/B or their equivalents. First order differential equations; linear differential equations with constant and variable coefficients, with the emphasis on techniques and applications; introduction to the Laplace transform. (3 credits)

MATHEMATICS 368Z
Actuarial Mathematics
Prerequisite: Mathematics 329A/B. The measure of mortality. Life annuities, life insurance, net annual premiums, net level premium reserves. The expense factor, special topics, population theory. (6 credits)

MATHEMATICS 371A/B
Introduction to Logic
Logic and Language. Propositional calculus. Validity and invalidity. Formal proofs. Propositional functions and quantifiers. Predicate calculus. Metamathematics. (3 credits)

MATHEMATICS 373A/B
Set Theory
Elementary properties of sets, relations, and functions. Equivalence relations. Axiom of choice and equivalent conditions. Ordinal and cardinal numbers. (3 credits)

MATHEMATICS 375A/B
Introduction to Combinatorial Mathematics
Elementary Graph Theory. Permutations and combinations. Principle of exclusion and inclusion and its applications; various combinatorial problems, recurrence relations. (3 credits)

MATHEMATICS 377A/B
Introduction to Game Theory
Matrix games. Strategies. Optimum strategies and the value of a game. Strictly determined games. Non-strictly determined games and linear programming. Applications. Further material according to interest of instructor and students. (3 credits)

MATHEMATICS 380Z
Selected Topics in Mathematics
Lectures: 3 hours per week. (6 credits)

MATHEMATICS 401A/B
Mathematics for the Biological Sciences I
Prerequisite: Enrolment in a Biology programme. Discrete probability, Binomial, Multinominal, and Poisson distributions, vectors, matrices, determinants, eigenvalues, linear programming, simplex method. Text: Grossman and Turner: *Mathematics for Biological Sciences.* (3 credits)

MATHEMATICS 402Z
Mathematical Statistics
Prerequisites: Mathematics 215A/B, 216A/B or their equivalents. Frequency distribution; averages and measures of dispersion; introduction to probability theory; random variables and mathematical expectation; moments and moment-generating functions; binomial, gamma, beta, exponential, normal, student-T, chi-square, and F-random variables; derivation of the probability density functions of these random variables and the study of their properties; distribution of sample statistics; estimation and small sampling theory; tests of hypotheses; curve fitting and correlation; partial and multiple correlation theory. (6 credits)

MATHEMATICS 403A/B
Mathematics for the Biological Sciences II
Prerequisite: Mathematics 401A/B. Markov chains and game theory, difference equations, differential equations, continuous probability, mathematical models in biology. Text: Grossman and Turner: *Mathematics for Biological Sciences. (3 credits)*

MATHEMATICS 405A/B
Stochastic Processes
Prerequisite: Mathematics 305A/B. Continuous time stochastic processes. Poisson processes. Continuous time Markov processes. Queuing models. Birth and death processes, renewal theory and reliability of systems. Selected topics. (3 credits)

MATHEMATICS 407A/B
Information Theory
Prerequisite: Mathematics 305A/B. Information and sources, Shannon's Theorem for Markov sources, probability relations in a channel, mutual information, error probabilities and decision rules. (3 credits)

MATHEMATICS 415A/B
Boolean Algebra
The algebra of sets, Boolean algebra, symbolic logic and propositional algebra, switching

algebra and other topics to suit the class. (3 credits)

MATHEMATICS 426Z
Algebra II

Prerequisite: Mathematics 326Z. Advanced topics in group theory including Sylow theorems. Fundamental theorem of finitely generated abelian groups, composition series. Galois' theorem for permutation groups. Introduction to field theory; normal and separable extension, Galois theory and unsolvability of the Quintic. (6 credits)

MATHEMATICS 436Z
Real Analysis

Prerequisite: Mathematics 334Z. The real number system, Dedekind cuts, metric spaces, sequences, series convergence tests, limits of functions, continuity, the Bolzano-Weierstrass theorem, derivatives, Taylor's theorem, functions of bounded variation, Riemann-Stieltjes integral, sequences and series of functions, uniform convergence. (6 credits)

MATHEMATICS 445A/B
History of Mathematics

Prerequisite: None. Early mathematics, Greek mathematics, European mathematics in the Middle Ages, the origin and development of analytic geometry and calculus, mathematics as free creation, the generality of mathematics in the 20th Century. (3 credits)

MATHEMATICS 451A/B
Complex Analysis

Prerequisite: Mathematics 334Z. Roots of a complex number. Functions, limits and continuity. Branch points; analytic functions; Cauchy-Riemann equations; singular points; complex integration; Green's formula, Liouville theorem. Taylor's and Laurent's theorem. Theory of Residues. Evaluation of integrals. Selected topics. (3 credits)

MATHEMATICS 473Z
Ordinary Differential Equations II

Prerequisite: Mathematics 353A/B. Laplace transforms; series solutions of linear differential equations with analytic coeffecients; boundary value problems, Fourier series, orthogonal sets of functions; Sturm-Liouville problems. (3 credits).

MATHEMATICS 501A/B
Sampling Theory and Multivariate Distributions

Prerequisites: Mathematics 325A/B and 402Z. Basic concepts of sampling, optimum allocation ratio estimates, bivariate distribution, multivariate normal distribution, marginal and conditional distribution, conditional expectation and regression, quadratic forms, X^2 and F-Statistics. (3 credits) *NOTE A/See § 200.5.*

MATHEMATICS 503A/B
Introduction to Regression and Analysis of Variance

Prerequisite: Mathematics 501A/B. General regression model, least square estimation, linear regression, confidence intervals, prediction and prediction improvement. Analysis of variance principle, design models, one way and two way classifications, interaction, fixed effect and random effect models, randomized block, latin square and balanced incomplete designs. (3 credits) *NOTE A/See § 200.5.*

MATHEMATICS 505A/B
Industrial Statistics

Prerequisite: Mathematics 402Z. Concepts of statistical controls, X, R, P and C charts, acceptance sampling, sequential probability ratio tests, sampling inspection, continuous sampling plans, reliability and life tests. (3 credits)

MATHEMATICS 507A/B
Theory of Point Estimation and Testing of Hypotheses

Prerequisite: Mathematics 402Z. Sufficient statistic, unbiased minimum variance, linear unbiased estimators, Rao and Blackwell theorem, Rao and Cramer inequality, maximum likelihood method of estimation, Neyman-Pearson lemma, construction of uniformly most powerful unbiased test, likelihood ratio test. (3 credits)

MATHEMATICS 509A/B
Introduction to Non-Parametric Statistics

Prerequisite: Mathematics 507A/B. The exact chi-square distribution, idea of goodness of fit, applications of chi-square test to counted data, contingency tables, order statistics, distribution of probabilities, confidence limits and tolerance limits, simple application of binomial and multinomial distribution, the Mann-Whitney test, Wilcoxon's signed rank test. rank correlation. (3 credits)

MATHEMATICS 526Z
Algebra III

Prerequisite: Mathematics 426Z. Rings and modules, structure of groups, lattices, categories and functors and multi-linear algebra. (6 credits)

MATHEMATICS 535A/B
Measure Theory and Integration

Prerequisite: Mathematics 436Z. The Lebesque integral and the classical problems it lays to rest. An exploration of more general theories of measure and integration in view of their mathematical clarifications or their applications. Topics covered include measure, outer measure, measurable sets, non-measurable sets, Lebesque integration, convergence, differentiation. (3 credits)

MATHEMATICS 540Z
Numerical Analysis

Prerequisites: Mathematics 341A/B, 343A/B or their equivalents, or special permission of the professor. Polynomial approximation. Interpolation; numerical differentiation; quadrature and summation; numerical solution of ordinary differential equations. Functional approximations. Least square techniques. Solutions of non-linear equations. Solutions of simultaneous linear equations, calculation of Eigenvalues and Eigenvectors of matrices. (6 credits)

MATHEMATICS 551A/B
Complex Analysis II

Prerequisite: Mathematics 451A/B. Analytic continuation. Maximum modulus theorem and its application. Argument principle. Rouche's theorem. Conformal mapping. Entire functions. (3 credits)

MATHEMATICS 567A/B
Topology

Prerequisite: Mathematics 436Z. Topological spaces, neighbourhoods, subspaces, continuous functions, compactness, connectedness, separation axioms, approximation. (3 credits)

MATHEMATICS 571A/B
Algebraic Topology

Prerequisites: Mathematics 326Z and 567A/B. Homotopy theory. Fundamental groups, classification and polygon representation of the topological surfaces. Orientability. Handles and cross caps. Triangulation, simplexes, chains and normal forms. Homology theory. (3 credits)

MATHEMATICS 575A/B
Senior Thesis

Prerequisite: Approval of the Department Chairman. Under special circumstances, approval will be given to undertake a research problem requiring independent work. The results will be directed and evaluated by a member of the department. (3 credits)

MATHEMATICS 579A/B
Calculus of Variations

Prerequisite: Mathematics 334Z. Euler-Lagrange equation, Legendre and Jacobi conditions, the E-function; Hilbert's invariant integral. Hamilton-Jacobi theory. Introduction to optimal control problems. Introduction to direct methods and partial differential equations (3 credits)

MATHEMATICS 580Z
Advanced Topics in Mathematics

Lectures: 3 hours per week. (6 credits)

MATHEMATICS 581A/B
Number Theory

Arithmetical functions d(n), o(n), $\phi(n)$ and their formulas. Mersenne numbers, perfect numbers. Congruences; Fermat theorem. Euler-Fermat theorem; Wilson's theorem. Divisibility properties of products of consecutive integers. Linear and quadratic congruences. Law of quadratic reciprocity. Mobius functions. Mobius inversion formula. Gauss theorem on $\phi(n)$. Gauss theorem on primitive roots. (3 credits)

MATHEMATICS 594Z
Methods of Mathematical Physics II

Prerequisites: Mathematics 321A/B, 323A/B, 334Z, 353A/B. General concepts of analysis. Partial differential equations of Physics. Function spaces and orthogonal sets. Sturm-Liouville problem. Fournier series and Fournier integral. Special functions; Legendre, Bessel. (6 credits)

51.20 Department of Modern Languages and Linguistics

Associate Professor and Chairman
H. FAMIRA

Professor
C. FONDA

Associate Professor
F. ANTOLIN

Assistant Professors
A. COSTANZO
C. DI MICHELE
H. SCHEER

51.20.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1.

The superscript indicates credit value.

60 BA Honours in one of the Modern Languages and Linguistics

54 Ger or Ital or Ling or Span
6 Ling
Every Honours student must take 6 credits in Linguistics within his Programme.

42 BA Major in one of the Modern Languages and in Linguistics

42 Ger or Ital or Ling or Span

30 Minor in one of the Modern Languages and in Linguistics

30 Ger or Ital or Ling or Span or Russ

72 BA Joint Honours in one of the Modern Languages and in English

6 Engl L418[6]
18 Engl in credits chosen from three different periods to parallel Modern Language courses.
6 Engl Elective credits
18 credits chosen from *one* modern language in different periods to parallel English courses.
12 Elective credits from *one* modern language.
6 Engl or Modern Language Elective credits
6 Joint English/Modern Languages Tutorial Engl L492[6]

60 BA Specialization in one of the Modern Languages and English

6 Engl L418[6]
12 Engl credits chosen from two different periods to parallel Modern Language courses.
12 Engl Elective credits
12 credits chosen from *one* modern language in *two* different periods to parallel Engl courses.
18 Elective credits chosen from one modern language.

NOTE: This programme replaces the Joint Majors programme.

72 BA Joint Honours in one of the Modern Languages and in French*

36 French: 6 credits in the XXth century. 6 credits in Quebec literature; 12 credits chosen from the XVIIth, XVIIIth, and XIXth century; L210[6] or L211[3] plus 3 credits in the missing century (XVIIth, XVIIIth, or XIXth century); 6 Elective credits chosen from the list of French Honours and Major courses or a full tutorial.
36 Modern Languages: These 36 credits are to be chosen in German, Italian or Spanish in consultation with the Chairman of Modern Languages and Linguistics. Literature courses will be chosen to parallel as much as possible the choice in French courses.

**NOTE: Sequence of courses to be determined in consultation with the departments concerned.*

51.20.2 DEPARTMENT OF MODERN LANGUAGES AND LINGUISTICS

For any combinations of programmes, students may consult the Chairman of the Department. All courses numbered '300' and higher are of a similar academic level.

Students who want to take a Minor in Russian must consult the Chairman of the Department.

Students seeking admission to the Honours programme on or after June 1st, 1977 will be bound by the Honours requirements outlined in § 16.2.4 of this Calendar. Students who already had Honours status by June 1st, 1977 will continue to be governed by the requirements which applied at the date of their admission to the Honours programme.

51.20.3 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.5.

GERMAN

GERMAN L200
Introduction to German Studies I
A comprehensive and thorough introductory language course for the student with little or no formal knowledge of German. May be taken concurrently with German L202. Students who have already taken German L203 may not take this course. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

GERMAN L201
Introduction to German Studies II
Prerequisite: German L200 or equivalent. A comprehensive and thorough introductory language course for the student with little or no formal knowledge of German. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

GERMAN L202
Elementary German I
An introductory language course which develops all basic skills. For students with no knowledge of German. Emphasis on the audio-lingual approach. May be taken concurrently with German L200. Students who have already taken German L200/L201 may not take this course. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

GERMAN L203
Elementary German II
Prerequisite: German L202 or equivalent. An introductory language course which develops all basic skills. Emphasis on the audio-lingual approach. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

GERMAN L204
Elementary German
Offered during *second semester,* this course is identical in content with German L202 and L203. *Lectures:* 6 hours, including 1 hour in the language lab per week for one term. (6 credits)

GERMAN L206
Reading German and Introduction to Translation I
Prerequisite: German L200/L201 or L202/L203 or equivalent. Grammatical review. Introduction to translation from German to English. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

GERMAN L207
Reading German and Introduction to Translation II
Prerequisite: German L206 or equivalent. Grammatical review. Introduction to translation from German to English. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

GERMAN L208
Intermediate German I
Prerequisite: German L200/L201 or L202/L203 or equivalent. Advanced German Grammar. Conversation and writing of compositions. Readings from German authors and other texts. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

GERMAN L209
Intermediate German II
Prerequisite: German L208 or equivalent. Advanced German Grammar. Conversation and writing of compositions. Readings from German authors and other texts. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

GERMAN L270
Advanced Composition and Stylistics I
Prerequisite: German L206/L207 or L208/L209 or equivalent. Introduction to comparative stylistics. Vocabulary expansion by word formation and derivation; selected grammatical problems. Analysis of various texts. *Lectures:* 3 hours per week. (3 credits)

GERMAN L271
Advanced Composition and Stylistics II
Prerequisite: German L270 or equivalent. Comparative stylistics. Vocabulary expansion by word formation and derivation; selected grammatical problems. Analysis of various texts. *Lectures:* 3 hours per week. (3 credits)

GERMAN L276
German Translation I
Prerequisite: German L206/L207 or equivalent, or permission of the Department. This course is a continuation of German L206/L207 and presents more complicated problems of translation from German into English. It is also an introduction to the basic skills of translating English into German. *Lectures:* 3 hours per week. (3 credits)

GERMAN L277
German Translation II
Prerequisite: German L276 or equivalent. This course presents complicated problems of translation from German into English. It is also an introduction to the basic skills of translating English into German. *Lectures:* 3 hours per week. (3 credits)

GERMAN L320
Survey of German Literature 800-1550
A chronological survey of Old High German, Middle High German and Early New High German literature. *Lectures:* 3 hours per week. (3 credits)

GERMAN L321
Survey of German Literature 1550-1750
Prerequisite: German L320 or equivalent. A chronological survey of the main currents of German literature from Luther to Lessing. *Lectures:* 3 hours per week. (3 credits)

GERMAN L350
Classicism in German Literature I
Prerequisite: German L206/L207 or L208/L209 or equivalent. The preclassic and early classic period of German literature with its philosophical background. *Lectures:* 3 hours per week. (3 credits)

GERMAN L351
Classicism in German Literature II
Prerequisite: German L350 or equivalent. The classic period of German literature and its impact upon "world literature". *Lectures:* 3 hours per week. (3 credits)

GERMAN L380
The Romantic Period I
Romanticism as a universal attitude. Theories and writings of the early German romanticists. *Lectures:* 3 hours per week. (3 credits)

GERMAN L381
The Romantic Period II
Prerequisite: German L380 or equivalent. The works of the major German romanticists and their influence upon European and American literature. *Lectures:* 3 hours per week. (3 credits)

GERMAN L400
German Literature of the 19th Century I
A study of representative post-romantic authors and their works. *Lectures:* 3 hours per week. (3 credits)

GERMAN L401
German Literature of the 19th Century II
Prerequisite: German L400 or equivalent. A study of representative authors of German realism and their works. *Lectures:* 3 hours per week. (3 credits)

GERMAN L430
The Rise of 20th Century German Literature I
Prerequisite: German L206/L207 or L208/L209 or equivalent. Naturalism and other literary trends in Germany between 1880 and 1910. Readings from the works of representative authors. *Lectures:* 3 hours per week. (3 credits)

GERMAN L431
The Rise of 20th Century German Literature II
Prerequisite: German L430 or equivalent. Expressionism and other literary trends in Germany between 1910 and 1933. Readings from the works of representative authors. *Lectures:* 3 hours per week. (3 credits)

GERMAN L450
Contemporary German Literature I
Literary trends in Germany since 1933. Literature in Hitler-Germany and German Emigrant literature. *Lectures:* 3 hours per week. (3 credits)

GERMAN L451
Contemporary German Literature II
Prerequisite: German L450 or equivalent. Post-war German literature. *Lectures:* 3 hours per week. (3 credits)

GERMAN L470
Masters of German Literature I
An in depth study of at least one German writer. The selection depends on the necessities of the programme. *Lectures:* 3 hours per week. (3 credits)

GERMAN L471
Masters of German Literature II
Prerequisite: German L470 or equivalent. An in depth study of at least one major German writer. The selection depends on the necessities of the programme. *Lectures:* 3 hours per week. (3 credits)

GERMAN L480
Tutorial I
Prerequisite: Permission of the Department. Guided reading in German literature to meet the student's individual need. (3 credits)

GERMAN L481
Tutorial II
Prerequisite: Permission of the Department. Guided readings in German literature. Written and oral criticism of the works studied. (3 credits)

GERMAN L264
(Also given as History L264)
Germany and Austria in Modern Times
Prerequisite: History L201 and L202 or equivalent. Course description see § 51.16.2. May be taken, with the permission of the Department, by German Majors or German Honours students as part of their requirements. (6 credits).

ITALIAN

ITALIAN L200
Introduction to Italian Studies
An introductory language course for students with little or no knowledge of Italian. Oral proficiency. Essentials of grammar. May be taken concurrently with Italian L202. Students who have already taken Italian L202/L203 may not take this course. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

ITALIAN L201
Italian Studies
Prerequisite: Italian L200 or equivalent. A comprehensive and thorough language course. Development of oral and written proficiency. Principles of grammar. Reading of basic texts. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

ITALIAN L202
Elementary Italian Conversation
An elementary language course for students with no knowledge of Italian. Audio-visual and audio-lingual techniques are employed in this course. May be taken concurrently with Italian L200. Students who have already taken Italian L200/L201 may not take this course. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

ITALIAN L203
Italian Conversation
Prerequisite: Italian L202 or equivalent. Development of conversational proficiency. Students who have already taken Italian L200/L201 may not take this course. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

ITALIAN L204
Basic Italian Conversation
Offered during *second semester* this course is identical in content with Italian L202 and L203. *Lectures:* 6 hours per week. *Lab:* 2 hours per week. (6 credits)

ITALIAN L210
Basic Intermediate Italian
Prerequisite: Italian L200/L201 or L202/L203 or equivalent. Italian grammar. Oral and written composition. Intensive reading of a play. Students who have already taken Italian L220/L221 may not take this course. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

ITALIAN L211
Intermediate Italian
Prerequisite: Italian L210 or equivalent. Problems in Italian grammar. Development of oral and written composition. Readings from modern Italian authors. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

ITALIAN L220
Introduction to Translation
Prerequisite: Italian L200/L201 or L202/L203 or equivalent. Translation of selected

texts from Italian into English and from English into Italian. Students who have already taken Italian L210/L211 may not take this course. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L221
Principles of Translation
Prerequisite: Italian L220 or equivalent. Progressive translation. Rendering of selected texts from Italian into English and from English into Italian with emphasis on the latter. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L250
Advanced Composition
Prerequisite: Italian L210/L211 or L220/L221 or equivalent. Creative writing: study and application of different writing techniques. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L251
Stylistics
Prerequisite: Italian L210/L211 or L220/L221 or equivalent. Stylistic theories. Analysis of literary styles: prose, poetry, drama. Writing of critical papers. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L260
Advanced Translation
Prerequisite: Italian L220/L221 or equivalent. Translation of selected technical and commercial texts. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L261
Problems in Translation
Prerequisite: Italian L260 or equivalent. Translation of selected scientific and literary texts. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L300
Italian Civilization
Prerequisite: Italian L210/L211 or L220/L221 or equivalent. A survey of Italy's cultural and scientific achievements from the origin to Unification. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L301
Italy Today
Prerequisite: Italian L210/L211 or L220/L221 or equivalent. A survey of Italy's cultural and scientific achievements from Unification to the present. Social, political and economic life in contemporary Italy. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L310
Italian Literature to 1600
Prerequisite: Italian L210/L211 or L220/L221 or equivalent. A survey of Italian literature of the Middle Ages and Renaissance. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L311
Italian Literature After 1600
Prerequisite: Italian L210/L211 or L220/L221 or equivalent. A survey of literary and cultural trends from 1600 to the present. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L320
Italian Theatre to 1800
Prerequisite: Permission of the Department. Origin and evolution of the Italian Theatre. Emphasis on Goldoni and the *Commedia dell' arte;* Alfieri and tragedy. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L321
Modern Italian Theatre
Prerequisite: Permission of the Department. A study of representative theatrical works of the nineteenth and twentieth century. Particular attention will be given to the innovative theatre of Pirandello. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L330
Dante
A study of Dante's minor works. Introduction to the *Divina Commedia. Lectures:* 3 hours per week. (3 credits)

ITALIAN L331
"Divina Commedia"
Prerequisite: Italian L330 or equivalent. Analysis of the *Divina Commedia. Lectures:* 3 hours per week. (3 credits)

ITALIAN L340
Petrarch and Early Italian Poetry
Prerequisite: Italian L210/L211 or L220/L221 or equivalent. A study of poetic works from the poets of the *Scuola siciliana* and the *Dolce stil nuovo.* Emphasis on Petrarch's *Canzoniere. Lectures:* 3 hours per week. (3 credits)

ITALIAN L341
Boccaccio and the Novella
Prerequisite: Italian L210/L211 or L220/L221 or equivalent. Origin and evolution of the early Italian novella. Emphasis on the *Decameron. Lectures:* 3 hours per week. (3 credits)

ITALIAN L350
Fifteenth-Century Prose
The rise of Humanism in Italy. A study of representative prose writings of fifteenth-century authors. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L351
Fifteenth-Century Poetry
A study of the epic and lyric poetry of the fifteenth century: chivalresque poetry in Italy; the lyric poetry of Poliziano and Lorenzo de' Medici. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L360
The Italian Renaissance
A study of the Italian Renaissance with emphasis on Machiavelli's *Principe* and *La mandragola. Lectures:* 3 hours per week. (3 credits)

ITALIAN L361
Ariosto and Tasso
A study of *Orlando Furioso* and *La Gerusalemme liberata. Lectures:* 3 hours per week. (3 credits)

ITALIAN L370
Seventeenth and Eighteenth-Century Prose
A study of representative scientific, philosophic and literary texts. Emphasis on Galileo, Vico, Goldoni and Alfieri. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L371
Seventeenth and Eighteenth-Century Poetry
A study of representative poetry of the Baroque and the Enlightenment. Emphasis on Marino, Parini and Alfieri. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L380
Nineteenth-Century Novel
A study of different approaches to the novel by Italian writers of the nineteenth century. Emphasis on Manzoni and Verga. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L381
Nineteenth-Century Poetry
Romanticism in Italy. A study of the major poetic works of Foscolo, Manzoni and Leopardi. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L390
Twentieth-Century Novel
A study of representative novelistic works of this century. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L391
Modern Italian Poetry
A study of the principal literary trends in modern Italian poetry. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L400
Literary Criticism to 1900
A survey of literary criticism from the Renaissance to the end of the nineteenth century. Readings from the critical works of Vico, Foscolo and De Sanctis. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L401
Modern Literary Criticism
Readings from the critical works of Benedetto Croce. Critical theories and trends of modern Italian criticism. *Lectures:* 3 hours per week. (3 credits)

ITALIAN L410
Tutorial
Prerequisite: Permission of the Department is required for enrolment in this course. A course designed to meet the individual needs of advanced students. Guided readings in Italian literature under the supervision of the Department. Written and oral criticism of the works studied. (6 credits)

SPANISH

SPANISH L200
Introduction to Spanish Studies I
A comprehensive and thorough introductory language course for the student with little or no formal knowledge of Spanish. May be taken concurrently with Spanish L202. Students who have already taken Spanish L202/L203 may not take this course. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

SPANISH L201
Introduction to Spanish Studies II
Prerequisite: Spanish L200 or equivalent. A comprehensive and thorough introductory language course for the student with little formal knowledge of Spanish. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

SPANISH L202
Elementary Spanish I
An audio-visual course for students with no knowledge of Spanish. This course is designed for developing conversational skills. May be taken concurrently with Spanish L200. Students who have already taken Spanish L200/L201 may not take this course. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

SPANISH L203
Elementary Spanish II
Prerequisite: Spanish L202 or equivalent. An audio-visual course for students with little knowledge of Spanish. This course is designed for developing conversational skills. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

SPANISH L204
Elementary Spanish
Offered during the *second semester,* this course is identical in content with Spanish L202 and L203. *Lectures:* 5 hours per week. *Lab:* 1 hour per week. (6 credits)

SPANISH L206
Idiomatic Spanish and Introduction to Translation I
Prerequisite: Spanish L200/L201 or L202/L203 or equivalent. Grammatical review. Introduction to translation from Spanish to English. Contemporary readings of literary, commercial, and journalistic texts. Students who have already taken Spanish L208/L209 may not take this course. *Lectures:* 3 hours per week. (3 credits)

SPANISH L207
Idiomatic Spanish and Introduction to Translation II
Prerequisite: Spanish L206 or equivalent. Grammatical review. Introduction to translation from Spanish to English. Contemporary readings of literary, commercial, and journalistic texts. *Lectures:* 3 hours per week. (3 credits)

SPANISH L208
Intermediate Spanish I
Prerequisite: Spanish L200/L201 or Spanish L202/L203 or equivalent. Review of Spanish grammar. Composition and oral practice with special stress on conversation by means of audio-visual practice. Students who have already taken Spanish L206/L207 may not take this course. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

SPANISH L209
Intermediate Spanish II
Prerequisite: Spanish L208 or equivalent. Review of Spanish grammar. Composition and oral practice with special stress on conversation by means of audio-visual practice. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

SPANISH L270
Advanced Composition and Stylistics I
Prerequisite: Spanish L206/L207 or L208/L209 or equivalent. Creative composition and comparative stylistic analysis of selected Spanish and Spanish-American texts. A course designed to give the student practical experience in the use of the spoken and written language as well as clear criteria on stylistics. *Lectures:* 3 hours per week. (3 credits)

SPANISH L271
Advanced Composition and Stylistics II
Prerequisite: Spanish L270 or equivalent. Creative composition and comparative stylistic analysis of selected Spanish and Spanish-American texts. A course designed to give the student practical experience in the use of the spoken and written language as well as clear criteria on stylistics. *Lectures:* 3 hours per week. (3 credits)

SPANISH L276
Spanish Translation I
Prerequisite: Spanish L206/L207 or equivalent. This course presents complicated problems of translation from Spanish into English. It is also an introduction to the basic skills of translation from English into Spanish. *Lectures:* 3 hours per week. (3 credits)

SPANISH L277
Spanish Translation II
Prerequisite: Spanish L276 or equivalent. This course presents complicated problems of translation from Spanish into English. It is also an introduction to the basic skills of translation from English into Spanish. *Lectures:* 3 hours per week. (3 credits)

SPANISH L280
The Spanish Language in America I
Prerequisite: Spanish L206/L207 or L208/L209 or equivalent. This course will present the characteristics of Spanish usage in North, Central and South America. *Lectures:* 3 hours per week. (3 credits)

SPANISH L281
The Spanish Language in America II
Prerequisite: Spanish L280 or equivalent. This course will present the characteristics of Spanish usage in North, Central and South America. Practice with students from different regions of the Spanish-speaking world. *Lectures:* 3 hours per week. (3 credits)

SPANISH L300
Spanish Civilization
A study of the development of Spanish Civilization from prehistoric times to the present. Lectures will be supplemented by films and other audio-visual aids. *Lectures:* 3 hours per week. (3 credits)

SPANISH L301
Spanish American Civilization
A study of the development of Spanish American Civilization from pre-Columbian times to the present. Lectures will be supplemented by films and other audio-visual aids. *Lectures:* 3 hours per week. (3 credits)

SPANISH L310
Introduction to Spanish Literature
Analysis of selected masterpieces from *El Cid* to the twentieth century. All literary genres will be included. *Lectures:* 3 hours per week. (3 credits)

SPANISH L311
Introduction to Spanish American Literature
Analysis of selected masterpieces from pre-Columbian times to the present day. All literary genres will be covered. *Lectures:* 3 hours per week. (3 credits)

SPANISH L320
Spanish Theatre I
Prerequisite: Permission of the Department. Evolution of the Spanish Theatre. Study of some classic outstanding plays. *Lectures:* 3 hours per week. (3 credits)

SPANISH L321
Spanish Theatre II
Prerequisite: Spanish L320 or equivalent. Stress on oral practice and the performance of a play. *Lectures:* 3 hours per week. (3 credits)

SPANISH L400
The High Middle Ages
Prerequisite: Spanish L270/L271 or L276/L277 or equivalent. Study of Spanish literary works from 1140 until 1300. Special emphasis will be placed on *El Mio Cid* and *El Romancero. Lectures:* 3 hours per week. (3 credits)

SPANISH L401
The Late Middle Ages
Study of literary works of XIVth and XVth centuries. Special emphasis will be placed on *El libro del buen Amor* and *La Celestina. Lectures:* 3 hours per week. (3 credits)

SPANISH L410
Don Quijote
Analysis of the themes, structure and form of Cervantes' immortal novel. *Lectures:* 3 hours per week. (3 credits)

SPANISH L411
The Theatre of the Golden Age
An analysis of the major works of Lope de Vega, Tirso de Molina and Calderón de la Barca. *Lectures:* 3 hours per week. (3 credits)

SPANISH L420
Enlightenment and Romanticism (Theatre)
A study of the principal authors and works of the 18th century. The origins of Romanticism and the theatre of the Romantic period. *Lectures:* 3 hours per week. (3 credits)

SPANISH L421
Romanticism (Poetry) and Realism
The poetry of the Romantic movement. Principal novels of the realistic period. *Lectures:* 3 hours per week. (3 credits)

SPANISH L430
The Generation of 1898 I
A study of three writers of this generation: Unamuno, Valle-Inclán and Machado. *Lectures:* 3 hours per week. (3 credits)

SPANISH L431
The Generation of 1898 II
A study of three writers of this generation: Baroja, Azorín and Maeztu. *Lectures:* 3 hours per week. (3 credits)

SPANISH L440
Lorca and the Generation of 1927
Analysis of the theatre and poetry of Lorca and his contemporaries: Juan Ramón Jiménez, Guillén, Alberti . . . etc. *Lectures:* 3 hours per week. (3 credits)

SPANISH L441
Spanish Literature Since the Civil War
General characteristics of literature since the Civil War. A study of some of the following authors: Cela, Matute, Ferlosio, Martín-Santos, Sender, Goytisolo . . . etc. *Lectures:* 3 hours per week. (3 credits)

SPANISH L450
Romanticism and Modernism in Spanish America
A study of the principal works and authors of these periods. *Lectures:* 3 hours per week. (3 credits)

SPANISH L451
Writers of the "Boom"
A study of the major works of some of the following authors: Carpentier, Rulfo, Paz, Fuentes, Asturias, García Márquez, Roa Bastos, Vargas Llosa, Borges, Cortázar . . . etc. *Lectures:* 3 hours per week. (3 credits)

SPANISH L460
The Short Story
A seminar on the principal writers of short stories in Spain and Spanish America. *Lectures:* 3 hours per week. (3 credits)

SPANISH L470
Mexican Literature
A study of Mexican literature from pre-Columbian times to the present. *Lectures:* 3 hours per week. (3 credits)

SPANISH L480
Tutorial I

Prerequisite: Permission of the Department. Guided readings in Spanish or Spanish-American literature to meet the student's individual needs. (3 credits)

SPANISH L481
Tutorial II

Prerequisite: Permission of the Department. Guided readings in Spanish or Spanish-American literature. Written and oral criticism of the works studied. (3 credits)

RUSSIAN

RUSSIAN L200
Elementary Russian I

An elementary course in reading, writing and grammar for students with little or no knowledge of Russian. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

RUSSIAN L201
Elementary Russian II

Prerequisite: Russian L200 or equivalent. An elementary course in reading, writing and grammar. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

RUSSIAN L208
Intermediate Russian I

Prerequisite: Russian L200/L201 or equivalent. Review of, and practice in, Russian grammar, composition, reading and conversation with some material from modern Russian writers. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

RUSSIAN L209
Intermediate Russian II

Prerequisite: Russian L208 or equivalent. Review of, and practice in, Russian grammar, composition, reading and conversation with some material from modern Russian writers. *Lectures:* 3 hours per week. *Lab:* 1 hour per week. (3 credits)

NOTE: Students interested in studying Russian language and literature beyond the levels reached in the courses described above should consult Section 41.8.2, where they will find an array of courses in that subject offered by the Sir George Williams Faculty of Arts. A Russian Studies programme is also offered (see Section 41.5.6).

51.20.4 LINGUISTICS

Linguistics deals with the study of language as a phenomenon of human behaviour. The Linguistics section of the Department of Modern Languages does not undertake the teaching of any specific language. Such instruction is provided by the other sections of the Department as well as by other Departments such as Classics, French, English.

The section of Linguistics offers a Major and Honours Programme to students wishing to concentrate in Linguistics.

Students must have the permission of the Department to enrol in any Linguistics courses.

Major Programme

The Major Programme consists of:

36 credits in Linguistics.

I. The following courses are required: L200[3], L201[3], L210[3], L211[3], L320[3], L321[3], L370[3], L371[3]. The remaining 12 credits in Linguistics are selected in consultation with the Department.

II. 18 credits taken in consultation with the Department, in one or two of the following: Latin, Greek, Hebrew, Russian, German, Spanish, Italian, French language, English language, Sociology, Philosophy.

III. Students with no knowledge of a second language should take at least six of the 18 credits in No. II above in a language course.

Honours Programme

The Honours Programme consists of:

60 credits in Linguistics.

I. The following courses are required: L200[3], L201[3], L210[3], L211[3], L320[3], L321[3], L350[3], L351[3], L370[3], L371[3], L410[3], L411[3].

II. In consultation with the Department, 12 credits in one or two of the following languages may be taken in lieu of 12 credits in Linguistics: Latin, Greek, Hebrew.

III. 18 credits taken in consultation with the Department in one or two of the following: Latin, Greek, Hebrew, Russian, German, Spanish, Italian, French language, English language, Sociology, Philosophy.

IV. Students with no knowledge of a second language must take in consultation with the Department, at least 12 of the 18 credits in any one or two of the language courses listed in No. III above.

V. The remaining 6 credits are Linguistics Elective credits.

LINGUISTICS L200
Introduction to Linguistics I

Phonetics and Phonemics. The linguist and language. The production of vocal sounds. Articulation. Phonetic symbols. Phonetic Transcription. Position of occurrence of sounds. Environmental conditioning. The phoneme. Functional and non-functional differences. Phonemic and phonetic differences. The segmental phonemes. The vowel phonemes. The supra segmental phonemes. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L201
Introduction to Linguistics II

Prerequisite: Linguistics L200 or permission of the Department. Historical Linguistics. The traditional aims of historical Linguistics. The major contributions of the nineteenth-century linguists. Types of languages. Language classifications. The comparative method. The method of internal reconstruction. Glottochronology. Dialect geography. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L210
Historical and Comparative Linguistics I
The history of the Indo-European languages and their interrelations. Exercises in etymology. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L211
Historical and Comparative Linguistics II
Prerequisite: Linguistics L210 or permission of the Department. The major language families of the world. Exercises in etymology and semantics. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L250
Language in Culture and Society I
Interrelations of language and other aspects of culture and society. Paralanguage. The cultural contents of language material. Gestalt theory and language. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L251
Language in Culture and Society II
Prerequisite: Linguistics L250 or permission of the Department. Educational implications of sociolinguistic studies. Bilingualism. Multilingualism. Pidgins and Créoles. Restricted codes. Language problems and literacy. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L300
Sociolinguistics I
The interaction of linguistic and social structures. Regional and social linguistic variations. Social variables. Linguistic variations and linguistic theory. Attitudes towards linguistic variety and educational policies. The social psychology of language choice. Language problems and literacy. Users and uses of language. Social processes in linguistic structure. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L301
Sociolinguistics II
Prerequisite: Linguistics L300 or permission of the Department. Directions in sociolinguistics. The Whorf-Sapir hypothesis. Conceptual categories in primitive communities. Ethnography of cognitive systems. American-Indian grammatical categories. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L320
Semantics I
Prerequisite: Linguistics L200/L201 or equivalent, or permission of the Department. Linguistic history of semantics. The emotive elements in name and sense. Central and contextual meaning, feeling, tone. Synonymy, hononymy, polysemy. Synchronistic and diachronistic semantics. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L321
Semantics II
Prerequisite: Linguistics L320 or permission of the Department. Theory of change. (Meillet, Wundt, Gustaf Sterne, Hans Sperber, Briel, Sturtevant). Classifications of changes of meaning: genetic, causal, functional. Changes of model and changes of syntax. The Port Royal grammarians. Synesthesia and pseudo-synesthesia. Panchronistic statistical laws. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L330
Anthropological Linguistics I
Prerequisite: Linguistics L200/L201 or equivalent. Theories about the development of language in mankind and individuals. The characteristics of human language as opposed to animal languages and other communication systems. Similarity and diversity among languages. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L331
Anthropological Linguistics II
Prerequisite: Linguistics L330 or permission of the Department. Speech surrogates and paralanguage. Language and thought in primitive communities. Swadesh, Sapir, Whorf's theories on some American-Indian languages. Linguistic change and reconstruction. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L350
Analytical Procedures and Descriptive Techniques I
Prerequisite: Linguistics L200/L201 or equivalent. The analysis of speech sounds: methods and procedures. The tools of modern phonetic and phonemic analysis. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L351
Analytical Procedures and Descriptive Techniques II
Prerequisite: Linguistics L350 or permission of the Department. Problems in phonetic and phonemic analysis. Speakers of various languages will act as informants to provide practice in recording and classifying data. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L360
Language and Thought I
Prerequisite: Linguistics L200/L201 or equivalent. Meaning and the structure of languages. Grammar, competence and performance. Language and perception. Universals in linguistic theory. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L361
Language and Thought II
Prerequisite: Linguistics L360 or permission of the Department. Cognition and the development of language. The cognitive basis of language learning in infants. Linguistic relativism. The structure of the psychological lexicon. Psychological models of bilingualism. Computer and linguistic processes. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L370
General Phonetics I
Prerequisite: Linguistics L200/L201 or equivalent. Description of speech sounds in articulatory terms. Identification and production of sounds that occur outside the Indo-European family of languages. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L371
General Phonetics II
Prerequisite: Linguistics L370 or permission of the Department. Description of speech sounds as to their acoustic qualities: frequency, amplitude, pitch, stress. Interpretation of sound spectrograms. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L400
Linguistics Applied to Language Learning I
Contrastive linguistic analysis of English and French/German/Italian/Russian/Spanish as related to language learning. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L401
Linguistics Applied to Language Learning II

Prerequisite: Linguistics L400 or permission of the Department. Cognitive and psychological problems in learning our "first language" and in learning foreign languages. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L410
Theory of Morphology and Syntax I

Prerequisite: Linguistics L200/L201 or equivalent. Traditional grammar and syntax. Structuralist grammar and syntax. *Lectures:* 3 hours per week. (3 credits)

LINGUISTICS L411
Theory of Morphology and Syntax II

Prerequisite: Linguistics L410 or permission of the Department. The theory of generative grammar. Phrase structure rules and specific transformational rules. Metatheoretical constraints. Theories of syntactic structures. *Lectures:* 3 hours per week. (3 credits)

51.21 Department of Philosophy

Professor and Chairman of the Department
ANDREW KAWCZAK

Professor
ERNEST JOOS

Associate Professors
JOHN DOYLE
EDMUND EGAN
JOHN McGRAW
VINCENT McNAMARA
DÉSIRÉE PARK
MARTIN REIDY

Assistant Professors
CHRISTOPHER GRAY
HENRI LAU
DENNIS O'CONNOR

51.21.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1.

The superscript indicates credit value.

60 BA Honours in Philosophy

Year I
12 Phil L202[6], L400[6]
12 Phil Elective or Cognate credits
Year II
12 Phil L410[6], L440[6]
6 Phil Elective credits
Year III
12 Phil L420[6], L450[6]
6 Phil Elective credits
Electives to be chosen in consultation with the Department.

36 BA Major in Philosophy

Year I
12 Phil L202[6], L400[6]
Year II
6 Phil L410[6]
6 Phil Elective credits
Year III
6 Phil L420[6]
6 Phil Elective credits
Electives to be chosen in consultation with the Department.

24 Minor in Philosophy

Year I
6 Phil Elective credits
Year II
6 Phil Elective credits
Year III
12 Phil Elective credits
Electives to be chosen in consultation with the Department.

51.21.2 DEPARTMENT OF PHILOSOPHY

The Philosophy Department offers three programmes of study: an Honours, a Major, and a Minor. In addition courses are offered to students with a general or specific interest in Philosophy. The courses consist of a General Cycle, a History Cycle, Area Courses, and Author Courses. Seminars and Tutorials are offered mainly for students in a programme in Philosophy.

Joint programmes for Majors have been established with the Departments of Biology, Modern Languages, Mathematics, Theology, Classics, and Political Science.

The Chairman of the Philosophy Department should be consulted for information concerning these programmes.

The programme of courses leading to an Honours BA in Philosophy consists of sixty credits in the Department, or fifty-four credits in the Department and a cognate course of six credits outside the Department with the approval of the Philosophy Department. Students seeking admission to the Honours programme on or after June 1st 1977 will be bound by the Honours requirements outlined in § 16.2.4 of this Calendar. Students who already had Honours status by June 1st 1977 will continue to be governed by the requirements which applied at the date of their admission to the Honours programme.

The programme of courses leading to a BA with a Major in Philosophy consists of thirty-six credits taken in the Department.

The programme of courses leading to a BA with a Minor in Philosophy consists of twenty-four credits taken in the Department.

51.21.3 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.5.

PHILOSOPHY L202
Introduction to Philosophy
A study of basic questions in the major areas of philosophy and the classical attempts to answer them. (6 credits)

PHILOSOPHY L204
Introduction to Logic
A study of the basic elements of Aristotelian and modern logic, including an analysis of argumentation, language, definition, fallacies, deduction and induction. (6 credits)

PHILOSOPHY L206
Deductive Logic
An analysis of Aristotelian syllogistic and a study of propositional logic, quantification and modern predicate logic, with special stress on the techniques of formal proof. Application of logic in computer science will be given special consideration. (3 credits)

PHILOSOPHY L208
Methods of Enquiry
A comparative study of the methods and structure of four basic types of knowledge: mathematics, science, history and normative disciplines. Consideration will be given to traditional issues in the theory of knowledge and scientific methodology, including the problem of axiomatization and induction. (3 credits)

PHILOSOPHY L210
Philosophy of Man
A study of representative classical and contemporary positions on human nature, action and life. Such topics as knowledge, affectivity, freedom, person, will be treated. (6 credits)

PHILOSOPHY L212
Ethics
A study of the principles underlying moral conduct with reference to classical and contemporary positions. (6 credits)

PHILOSOPHY L214
Social and Political Philosophy
Prerequisite: 6 credits in Philosophy or the permission of the Department. This course treats of the individual in relation to the State and Society through the reading and discussion of selected texts. Problems treated: political authority, its sources and varieties; the limits of political authority; classical images of man; personality and society; the paradox of social control. (6 credits)

PHILOSOPHY L322
Political Philosophy: Communism, Fascism, and Democracy
Prerequisite: 6 credits in Philosophy or the permission of the Department. This course concentrates on the theoretical foundations of communism, fascism, and democracy through the reading and discussion of selected texts. (6 credits)

PHILOSOPHY L326
Legal Philosophy
Prerequisite: 6 credits in Philosophy or the permission of the Department. This course concentrates on definitions of law and the ways of reasoning in Law. It includes discussion of such basic legal issues as responsibility and excuse, person and property, right and obligation, contract and punishment. (6 credits)

PHILOSOPHY L328
Symbolic Logic
Prerequisite: 6 credits in Logic or permission of the Department. A study of first order predicate calculus, techniques of formal proof, and the development of axiomatic systems. Attention will be given to the application of logic in computer science. (6 credits)

PHILOSOPHY L330
Philosophy of Social Science
Prerequisite: 6 credits in Philosophy or third year standing in a social science department or permission of the Department. Following the distinction between natural and social sciences, this course will be concerned with philosophies of the social sciences. It will investigate the structure, methodology, and problems of these sciences toward understanding and clarifying how they function as quasi-separable disciplines and how they contribute to a wider understanding of man and his varied social relations. (6 credits)

PHILOSOPHY L340
Contemporary Theories of Love
Prerequisite: One previous course in Philosophy. A two-semester topical analysis of love and attendant phenomena with special emphasis on their metaphysical, epistemological, psychological, aesthetic, social, theological and linguistic dimensions. The classes will be conducted on a lecture-seminar basis. (6 credits)

PHILOSOPHY L350
Philosophy of Communication
This course is concerned with a philosophical analysis of the foundations of communication acts; linguistic and non-linguistic, cognitive and affective. Philosophical sources may include: F. Nietzsche, M. Black, M. Merleau-Ponty and P. Ricoeur. (6 credits)

PHILOSOPHY L360
Philosophy of Culture
Prerequisite: 6 credits in Philosophy or the permission of the Department. This course entails a philosophical critique of contemporary western culture, stressing such issues as identity crisis, the weakening of structures of orthodoxy, meditation and humour in relation to the vita activa, work in relation to labour, and the socio-cultural manifestation of value crisis. (6 credits)

PHILOSOPHY L375
Philosophy of Religion
Prerequisite: 6 credits in Philosophy or permission of the Department. A critical assessment of modern developments in Philosophy regarding the question whether thinking man can maintain a religious belief in God. (6 credits)

PHILOSOPHY L385
Philosophy of Education
An examination of philosophical principles underlying educational theories and of the problems arising from the practical implementation of those theories. (6 credits)

PHILOSOPHY L390
(Also given as History L390)
Philosophy of History
Prerequisite: Second or third year standing in a History programme or permission of the

Department. An analysis of the nature of historical knowledge and explanation will be followed by a study of classical and contemporary attempts to elucidate the meaning of history. Authors discussed include Augustine, Vico, Kant, Hegel, Marx, Spengler, Popper, Toynbee. (6 credits)

PHILOSOPHY L400
History of Ancient Philosophy
A study of Western Philosophy from the Pre-Socratics to Plotinus. (6 credits)

PHILOSOPHY L410
History of Mediaeval Philosophy
Prerequisite: Philosophy L400 or the permission of the Department. A study of Western Philosophy from Augustine to the later Scholastics. (6 credits)

PHILOSOPHY L420
History of Modern Philosophy
Prerequisite: 6 credits in Philosophy or permission of the Department. A study of Western Philosophy from Descartes to Hegel. (6 credits)

PHILOSOPHY L430
Contemporary Philosophy
Prerequisite: 6 credits in Philosophy or permission of the Department. Selections from main authors and trends in recent Philosophy, such as Existentialism, Phenomenology, Analytical Philosophy and Marxism. (6 credits)

PHILOSOPHY L440
Second Year Seminar
Prerequisite: 2nd year standing in a philosophy programme or permission of the Department. Problems in Moral Philosophy. Topics to be announced. This seminar will conduct the students through a series of problems on moral topics. (6 credits)

PHILOSOPHY L450
Third Year Seminar
Prerequisite: 3rd year standing in a philosophy programme or permission of the Department. Themes selected from modern and contemporary Philosophy. Topics and authors to be announced. (6 credits)

PHILOSOPHY L455
Aesthetics
Prerequisite: 6 credits in Philosophy or the permission of the Department. This course will examine central problems in the philosophy of art and sensibility, examining the works of major authors in this area, such as Aristotle, Longinus, Kant, Hegel, Dewey, Santayana. (6 credits)

PHILOSOPHY L460
Epistemology
Prerequisite: 12 credits in Philosophy or permission of the Department. A study of characteristic problems in epistemology with particular emphasis on their historical and systematic contexts. The concepts analyzed include fundamental questions in the empirical sciences. (6 credits)

PHILOSOPHY L470
Metaphysics
Prerequisite: 12 credits in Philosophy or permission of the Department. In this course, metaphysics will be treated in two ways; firstly, the problem of being in classical and contemporary ontologies; secondly, the metaphysical suppositions underlying epistemological, moral and social theories. (6 credits)

PHILOSOPHY L475
Philosophy of God
Prerequisite: 6 credits in Philosophy or permission of the Department. The problem of the natural knowledge of God including readings from Plato, Aristotle, Anselm, Aquinas, Descartes, Hume, Pascal, Kant, Hegel, Feuerbach, Marx, Kierkegaard, Newman, Nietzsche, Sartre, Ayer and Russell. (6 credits)

PHILOSOPHY L480
Author course in Philosophy
Prerequisite: 18 credits in Philosophy or permission of the Department. An author course is an intensive study of the writings of selected authors. The author or authors to be announced. (6 credits)

PHILOSOPHY L491
Tutorial in Philosophy
Prerequisite: 18 credits in Philosophy or permission of the Department. If permission for a Tutorial is granted, the Tutorial Director will supervise an intensive reading programme in the student's area of special interest. (3 credits)

PHILOSOPHY L492
Tutorial in Philosophy
Prerequisite: 18 credits in Philosophy or permission of the Department. If permission for a Tutorial is granted, the Tutorial Director will supervise an intensive reading programme in the student's area of special interest. (3 credits)

The following course is a university level course which was offered in the year indicated but did not appear in the official Calendar.

1976-1977
Philosophy 511A
Tutorial in Philosophy
(3 credits)

51.22 Department of Physics

Associate Professor and Chairman
M.S. DUBAS, S.J.

Professor
S.N. BAGCHI

Associate Professors
C.E. EAPPEN
C.S. KALMAN
R.L. KOVACS
T.A. KOVATS
J. SHIN

Senior Lab Demonstrator
S. MARKIZA

51.22.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1.

The superscript indicates credit value.

97 BSc Honours in Physics

40 Phys $301A^3$, $308Z^6$, $311B^3$, $320B^3$, $323A^3$, $400A^3$, $405B^3$, $408A^3$, $411A^3$, $412B^3$, 381^1, 382^2, 481^2, 482^2
6 Math $334Z^6$
33 Phys* Elective credits
18 Elective credits

**A 3-credit course in Ordinary Differential Equations is required in all programmes and this requirement can be fulfilled through elective credits if the student has not already had the equivalent.*

37 BSc Major in Physics

21 Phys $301A^3$, $308Z^6$, $311B^3$, $400A^3$, $405B^3$, $408A^3$
7 Phys (Lab) 381^1, 382^2, 481^2, 482^2
3 Phys* Elective credits
6 Math $334Z^6$

**A 3-credit course in Ordinary Differential Equations is required in all programmes and this requirement can be fulfilled through elective credits if the student has not already had the equivalent.*

91 BSc Specialization in Physics

40 Phys $301A^3$, $308Z^6$, $311B^3$, $320B^3$, $323A^3$, $400A^3$, $405B^3$, $408A^3$, $411A^3$, $412B^3$, 381^1, 382^2, 481^2, 482^2
6 Math $334Z^6$
21 Phys* Elective credits
24 Elective credits

**A 3-credit course in Ordinary Differential Equations is required in all programmes and this requirement can be fulfilled through elective credits if the student has not already had the equivalent.*

24 Minor in Physics

18 Phys $301A^3$, $308Z^6$, $311B^3$, $400A^3$, $405B^3$
3 Phys (Lab) 381^1, 382^2 or 481^2
3 Phys* Elective credits

**A 3-credit course in Ordinary Differential Equations is required in all programmes and this requirement can be fulfilled through elective credits if the student has not already had the equivalent.*

51.22.2 DEPARTMENT OF PHYSICS

The Department offers programmes leading to a 24-credit Minor, a 37-credit Major, a Specialization and an Honours degree. Students in the Specialized programmes will be required to take a number of specified courses to which a variety of Physics electives can be added depending upon the degree of specialization desired and the current availability of course offerings.

Students seeking admission to the Honours programme on or after June 1st 1977 will be bound by the Honours requirements outlined in § 16.2.4 of this Calendar. Students who already had Honours status by June 1st 1977 will continue to be governed by the requirements which applied at the date of their admission to the Honours programme.

51.22.3 COURSE DESCRIPTIONS

NOTE: All Physics courses except Phys 201Z, 315A, 316Z, 317B, 345A, 351A and 355B require the equivalent of 6 credits of Collegial Physics and 6 credits of Collegial Calculus as prerequisites. Phys 203A as well as the courses listed above may not be taken for university credits by students registered in Physics programmes.

PHYSICS 201Z
General College Physics

(High School courses in Physics and Functions highly recommended. Mathematics, 215A/B and 216A/B must be taken concurrently.) An introductory course in the elements of mechanics, thermodynamics, light, electricity and magnetism. *Lectures:* 3 hours per week for two terms. *Lab:* 2 hours on alternate weeks for two terms. Reference texts: J.G. Stripe: *The Development of Physical Theories* (McGraw-Hill), C. S. Kalman: *Physics, What's That?* (lithograph notes) and *Insights to Basic Experimental Physics Laboratory* (lithograph lab manual). (6 credits) *NOTE A/See § 200.5*

PHYSICS 203A
Heat and Sound

Temperature and thermometry, heat effects, measurement and transfer, thermal properties of matter, thermodynamics, kinetic theory, waves, vibrations and acoustical phenomena. *Lectures:* 3 hours per week. *Lab:* 2 hours per alternate week. Reference text: Sears and Zemansky: *University Physics* (4th ed). (3 credits) *NOTE A/See § 200.5*

PHYSICS 301A
Optics

Principles of Geometrical and Physical optics, interference, diffraction, polarization, Double refraction. *Lectures:* 3 hours per week. Reference text: Morgan: *Introduction to Geometrical and Physical Optics* (McGraw-Hill) (3 credits)

PHYSICS 302Z
Space Physics

A highly descriptive course for university science students in the elements of astronomy, astro-physics, artificial satellite motion and space travel. The topics covered are: The earth and its motions; celestial mechanics; the solar system; elements of atomic physics; radio astronomy; the sun, other stars, galaxies and nebulae; artificial satellite motions; communication satellites; rocket motion; space travel; apollo missions and their findings; the nature of our universe. *Lectures:* 3 hours per week for two terms. Reference text: S.P. Wyatt: *Principles of Astronomy* (Allyn & Bacon). (6 credits)

PHYSICS 308Z
Electricity and Magnetism

Coulomb's Law. Electric fields. Gauss's Law. Electric potential. Capacitance. Dielectric theory and behaviour. Direct currents. Moving charges and Magnetic fields. E.M. induction. Mutual and self inductance. Magnetic properties of matter. Steady-state AC circuit analysis. Maxwell's equations and electro-magnetic waves. Reference Text: A.F. Kip: *Fundamentals of Electricity and Magnetism.* (6 credits)

PHYSICS 311B
Mechanics

Prerequisite: One half course in differential equations. Particle kinematics. Newton's laws. Elastic forces. Force, momentum, torque, angular momentum, energy, stable equilibrium, conservative forces, driven damped oscillation, force fields, central forces. *Lectures:* 3 hours per week. Reference Text: W. Arthur and K. Fenster: *Mechanics.* (3 credits)

PHYSICS 315A
The Mechanics of Visual Representation

An introductory course combining laboratories and lectures illustrating the basic laws which govern and control the mechanism of image reproduction. Relevant topics concerning the interaction of light and materials are discussed and demonstrated. Students perform experiments with light-sensitive materials, the pin-hole camera, light intensity and illumination measurement. Human visual response, the gray scale, sensitometry, densitometry, the characteristic curve and ASA, DIN, film speeds are examined in depth. This course parallels the Chemistry lab course 315A, and both are designed to complement the "Dynamics of Visual Representation I" course (Communication Studies L275). This course is designed for students in Communication Studies *Lab & Lectures:* 3 hours per week. Reference texts: M.J. Langford: *Basic Photography* (Amphoto) T.H. James and G.C. Higgins: *Fundamentals of Photographic Theory* (Morgan & Morgan). (3 credits)

PHYSICS 316Z
Understanding the Physics of Media

The course covers the evolution of Physics in the discoveries that apply to our technology and media. This course is designed for Communication Studies students. *Lab:* one 3-hours, session per week for two terms. Reference text: A. Einstein and L. Infeld: *The Evolution of Physics.* (6 credits)

PHYSICS 317B
The Physics of Photo-Reproduction

Prerequisite: Phys 315A. A combined laboratory and lecture course designed for students in Communication Studies who have some basic knowledge of physical laws. Ideas introduced in the "Mechanics of Visual Representation" (Phys 315A) are further developed, covering such topics as exposure measurements and control, and the Standard Association Institute Photographic Exposure Guide. The mechanics of a lens, image formation, f-stops diaphragm openings, the 3-colour composition of light, the colour-temperature scale, and filters, are studied. This course is so designed that the student will gain an intelligent and efficient use of his equipment. *Lab and Lectures:* 3 hours per week. Reference text: M.J. Langford: *Basic Photography* (Amphoto). (3 credits)

PHYSICS 320B
Mathematical Physics I

Vector spaces. Matrices and determinants. Linear operators. Linear coordinate transformations. Systems of simultaneous linear equations. *Lectures:* 3 hours per week. Reference text: *To be announced.* (3 credits)

PHYSICS 323A
Mathematical Physics II

Prerequisites: Phys 320B, Math 334Z (Advanced Calculus). Classification and derivation of partial differential equations of physics. Orthogonal functions. Sturm-Liouville problem and special functions. Test of uniform convergence. Theory of Fourier Series. *Lectures:* 3 hours per week. Reference text: *To be announced.* (3 credits)

PHYSICS 345A
Introduction to Consumer and Commercial Electronics

A course primarily for people who wish to acquire a basic knowledge of some of today's consumer and commercial electronics, but leaving out most of the extensive theories. The course consists of a series of lectures, laboratory projects and demonstrations. Topics to be treated are: High Fidelity Amplifiers; Program Sources and Reproducers; AM, FM and SSB Transmission; Black and White and Colour Television Reception; Auto-Electronics; Electronic Control Systems; Applications of Linear and Digital Integrated Circuits. *Lectures:* 2 hours per week. *Lab:* 2 hours per week. Reference text: P. Zbar: *Industrial Electronics* (2nd ed); Printed notes. (3 credits)

PHYSICS 351A
Biomechanics of Human Motion

The application of elementary laws of mechanics to the understanding of static equilibrium conditions of the human body subjected to external forces—the efficiency of human movement seen from the reference point of physical laws as applied to sports. This course is intended for the physiotherapist, the athlete, and all those interested in understanding body mechanics in the light of inanimate physical laws. *Lectures:* 3 hours per week. Reference text: Geoffrey Dyson: *The Mechanics of Athletics* (U. of London, 6th ed). (3 credits)

PHYSICS 353B
Biophysics

Selected topics in physics as they relate to biology. Physical forces in biological systems: mechanical, electromagnetic, osomotic, "thermal". Radiation—electromagnetic and acoustical: nature, sources, effects. Transport processes electrical, thermal, fluid. *Lectures:* 3 hours per week. Tentative text: E.J. Casey: *Bio-physics, Concepts and Mechanisms* (Reinhold, 1962). (3 credits)

PHYSICS 355B
Electronic Instrumentation

This course is recommended for Science students and others who might be working in scientific research laboratories. This course begins with basic electrical measurements and gradually leads to amplifier circuits of vacuum tubes and transistors, operational amplifiers, oscillators, servo systems as in strip chart recorders, feed-back control, digital circuits and other devices currently used in research laboratories. *Lectures:* 3 hours per week. *Lab:* 2 hours per week. Reference text. *To be announced.* (4 credits)

PHYSICS 391A/392B
Selected Topics in Physics

The topics chosen will vary from year to year. The course is designed to provide students with the opportunity of extending their studies beyond subjects already included in the curriculum. Open to all students with permission of the department. (3 credits each)

PHYSICS 400A
Atomic Physics

Prerequisites: Phys 308Z, 320B and 3 credits in Ordinary Differential Equations. Special Relativity. Particle properties of waves. Wave properties of particles. Atomic structure. Bohr model of the atom. Schrodinger's equation. *Lectures:* 3 hours per week. Reference texts: A. Beiser: *Perspectives in Modern Physics* (McGraw-Hill). Richtmeyer, Kennard, Cooper: *Introduction to Modern Physics* (McGraw-Hill). (3 credits)

PHYSICS 405A
Classical Thermodynamics

Temperature and thermometry; first and second laws of thermodynamics with applications; kinetic theory; special topics. *Lectures:* 3 hours per week. Reference text: M.W. Zemansky: *Heat and Thermodynamics* (McGraw-Hill, 5th ed), Sears: *Introduction to Thermodynamics; Kinetic Theory and Statistical Mechanics* (Addison-Wesley). (3 credits)

PHYSICS 408A
Electronics I

Prerequisite: Phys 308Z or equivalent. Review of AC and DC network theory; Elementary semi-conductor theory as applied to P-N junctions; Power supplies and diode applications; Theory of transistors; Hybrid models of transistors; Analysis of single and multi-stage amplifiers. Field effect transistors, MOS devices; Silicon control rectifiers. *Lectures:* 3 hours per week. Reference text: *To be announced.* (3 credits)

PHYSICS 409A/B
Statistical and Thermal Physics

Prerequisites: Phys 400A, 412B and 405A. Elementary probability theory, Gaussian distribution, statistical enumeration of microstates, equilibrium distributions, thermal and mechanical interactions, definitions of temperature and entropy, laws of thermodynamics and applications; partition functions, canonical ensembles, statistical distribution functions and their applications. *Lectures:* 3 hours per week. Reference texts: Reif: *Statistical and Thermal Physics* (McGraw-Hill); K.C. Macdonald: *Introductory Statistical Mechanics for Physicists* (Wiley). (3 credits)

PHYSICS 411A
Mechanics

Prerequisite: Phys 311B. Kinematics of systems of particles and rigid bodies. Particle collisions, rocket motion, plane motion of rigid bodies. Impulse. Particle motion in non-inertial frames, space motion of a particle. Rigid body motion about a fixed point, gyroscopes. Introduction to equations of Lagrange and Hamilton. *Lectures:* 3 hours per week. Reference text: H. Goldstein: *Classical Mechanics* (Addison-Wesley). (3 credits)

PHYSICS 412B
Introduction to Quantum Mechanics

Prerequisite: Phys 400A. The Schrodinger equation. The particle motion in a box. Harmonic oscillator. Quantum Theory of hydrogen atom. Magnetic quantum numbers. Angular momentum. Electron spin. Exclusion principle. Periodic table. Atomic spectra. X-ray spectra. *Lecture:* 3 hours per week. Reference text: A. Beiser: *Perspectives of Modern Physics* (McGraw-Hill), Richtmeyer, Kennard, Cooper: *Introduction to Modern Physics* (McGraw-Hill). (3 credits)

PHYSICS 413A/B
Advanced Mechanics

Prerequisites: Phys 320B, 323A and 411A. Lagrange equations, variational principles, central force scattering, kinematics of rigid bodies using orthogonal matrices—Cayley-Klein parameters and Pauli-spin matrices. Rigid body

motion—Covariant Lagrangian and Hamiltonian equations. Minimal principles; canonical transformations. Lagrange and Poisson brackets. Hamilton-Jacoby theory. Small oscillations. *Lectures:* 3 hours per week. Reference text: H. Goldstein: *Classical Mechanics* (Addison-Wesley). (3 credits)

PHYSICS 420A/B
Mathematical Physics III

Prerequisite: Phys 323A. The Fourier method and the solution of partial differential equations in mathematical physics. Special functions. *Lectures:* 3 hours per week. Reference text: *To be announced.* (3 credits)

PHYSICS 421A/B
Mathematical Physics IV

Prerequisite: Math 334Z (Advanced Calculus). Complex numbers. Complex functions. Analytic functions. Cauchy theorem. Integral theorems. Taylor and Laurent series. Residue theorem. Fourier and Laplace transforms and their application to ordinary and partial differential equations. *Lectures:* 3 hours per week. Reference text: *To be announced.* (3 credits)

PHYSICS 503A/B
Nuclear Physics

Prerequisites: Phys 400A and 412B. Radioactivity, decay laws, nuclear transitions and reactions, passage of radiation through matter. Detection and acceleration of particles. Nuclear structure and models. Neutrons. Introduction to High Energy Physics. *Lectures:* 3 hours per week. *Lab:* 5 hours per week. Reference texts: Halliday, *Introduction to Nuclear Physics* (Wiley) Smith: *A Textbook on Nuclear Physics* (MacMillan) Kaplan; *Nuclear Physics* (Addison-Wesley). (4 credits)

PHYSICS 505A/B
Introduction to Solid State Physics

Prerequisites: Phys 400A, 412B and 409, the latter taken concurrently. Crystal structure of solids. Crystal diffraction. Lattice dynamics. Specific heat. Electrons in metals. Free electron theory of conduction, band theory, semi-conductors, dielectric and magnetic properties of solids, and related special topics. *Lectures:* 3 hours per week. Reference texts: Levy: *Principles of Solid State Physics* (Academic Press) Blakemore: *Solid State Physics* (Saunders) Kittel: *Introduction to Solid State Physics* (Wiley) (3 credits)

PHYSICS 508A/B
Electronic II

Prerequisite: Phys 408A. A continuation of Electronics I with emphasis on circuit applications and analysis. Topics include digital logic gates and implementation of logic functions, differential amplifiers, high impedance circuits, oscillators, multivibrators and pulse circuits, power amplifiers, noise and feedback analysis. *Lectures:* 3 hours per week. Reference text: *To be announced.* (3 credits)

PHYSICS 511A/B
Relativity

Prerequisites: Phys 311B, 320B and 411B. Classical theory of some light experiments. Postulates of the Special Theory. Lorentz transformation. Relativistic kinematics. Relativistic mechanics of a particle. Four-dimensional formation of the Special Theory. Electrodynamics in a vacuum. *Lectures:* 3 hours per week. Reference text: *To be announced.* (3 credits)

PHYSICS 512A/B
Electromagnetic Theory

Prerequisites: Phys 308Z, 323A, 420A. Derivation of the laws of electrostatics and magnetostatics from the basic experimental laws; method of images; solutions of Laplace's and Poisson's equations for electrostatic problems, magnetism, Maxwell's equations. *Lectures:* 3 hours per week. Reference text: J.D. Jackson: *Classical Electrodynamics* (Wiley). (3 credits)

PHYSICS 513A/B
Electromagnetic Theory

Prerequisite: Phys 512A. Wave Solutions of Maxwell's equations in various media. Classical model of a dielectric. Helmholtz equation and wave equation by Green's functions. Multipole fields. Interaction of charged particles. Radiation by moving charges. Abraham Lorentz theory. Reference text: J.D. Jackson: *Classical Electrodynamics* (Wiley). (3 credits)

PHYSICS 514A/B
Quantum Mechanics

Prerequisites: Phys 400A, 412B, 420A/B. Postulates of quantum mechanics; operator formulism; algebraic methods, angular momentum; approximation methods; scattering identical particles. *Lectures:* 3 hours per week. Reference text: S. Weider: *The Foundation of Quantum Theory* (Academic Press). (3 credits)

PHYSICS 591A/592B
Advanced Topics in Physics

The topics chosen will vary from year to year. The course is designed to provide students with the opportunity of extending their studies beyond subjects already included in the curriculum. Open to all students with permission of the department. (3 credits each)

PHYSICS 381
Optics Lab

Prerequisite: Phys 301A.
(1 credit)

PHYSICS 382
Electricity and Magnetism Lab

Prerequisite: Phys 308Z.
(2 credits)

PHYSICS 481
Atomic Physics Lab I

Prerequisite: Phys 400A.
(2 credits)

PHYSICS 482
Electronics Lab I

Prerequisite: Phys 408A.
(2 credits)

PHYSICS 581
Atomic Physics Lab II

Prerequisite: Phys 400A.
(2 credits)

PHYSICS 582
Electronics Lab II

Prerequisites: Phys 408A, 482 and 508 concurrently.
(2 credits)

51.23 Department of Political Science

Assistant Professor and Chairman
E. M. PRICE

Professor
H. P. HABIB

Associate Professors
R. C. COYTE
L. LASZLO
J. W. MOORE
K. S. OH

Assistant Professors
M. DANIS
F. STARK

51.23.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1.

The superscript indicates credit value.

63 BA Honours in Political Science

Year I
6 Pol Sc L200[6] or equivalent
12 Pol Sc*
Year II
18 Pol Sc**
Year III
24 Pol Sc***#
3 Pol Sc L499[3]

42 BA Major in Political Science

Year I
6 Pol Sc L200[6] or equivalent
6 Pol Sc*
Year II
12 Pol Sc**
Year III
18 Pol Sc***

24 Minor in Political Science

Year I
6 Pol Sc L200[6] or equivalent
Year II
6 Pol Sc Elective credits
Year III
12 Pol Sc Elective credits

60 BA Specialization in Political Science

Year I
6 Pol Sc L200[6] or equivalent
12 Pol Sc*
Year II
18 Pol Sc**
Year III
24 Pol Sc***#

NOTE:

* *To be chosen from the '200' or '300' level.*

** *To be chosen from the '300' or '400' level; to be chosen from the '200' level only with the permission of the Department.*

*** *To be chosen from the '300' or '400' level.*

\# *6 credits may be taken in a cognate discipline with the permission of the Department.*

51.23.2 DEPARTMENT OF POLITICAL SCIENCE

The Department of Political Science offers four programmes of study: an Honours, a Specialization, a Major, and a Minor.

The programme of courses leading to an Honours BA in Political Science consists of 63 credits in the Department or 57 credits in the Department and 6 credits in a cognate discipline with the permission of the Department. In addition 30 elective credits in other departments must be taken to complete the degree requirements. In Year II and Year III students are required to take 18 credits in the Seminars listed at the '400' level. (Students intending to pursue graduate studies in Political Science are strongly advised to include Pol Sc L440.) Students entering on or after June 1st 1977 are governed by the following grade requirements: An Honours student will be required to maintain an average of 73% in all his/her courses; a minimum of 70% in each Political Science course and an average of 75% in all Political Science courses taken throughout his/her entire Honours programme. (Honours standing will be reviewed at the end of each academic year.) In order to maintain Honours status no acceleration of courses will be permitted. In the second year of the Honours programme each student will choose a faculty adviser who will advise the student on course selection and his/her Honours thesis topic.

The programme of courses leading to a Specialization BA in Political Science con-

sists of 60 credits in the Department or 54 credits in the Department and 6 credits in a cognate discipline with the permission of the Department. In addition 30 elective credits in other departments must be taken to complete the degree requirements. This programme is designed for students who wish to acquire a broad knowledge of the discipline without the quality requirements of the Honours programme.

The programme of courses leading to a BA with a Major in Political Science consists of 42 credits in the Department. In addition 48 credits must be taken to complete the degree requirements.

The programme of courses leading to a Minor in Political Science consists of 24 credits in the Department. The Minor is designed to provide an opportunity for students to make a combination with a Specialization, a Major or Honours in another discipline. A student's Minor will be arranged in consultation with the Department of Political Science so that it relates to courses in the major area of study.

51.23.3 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.5.

Explanation of Course Numbers
1. Courses in the '200' and '300' range are open to all Political Science students and students in other departments.
2. Courses in the '400' range are open to all students in Political Science who are in their second and third year. Students in other departments may take these courses with the permission of the Political Science Department.

POLITICAL SCIENCE L200
Introduction to Political Science
A description of the features universal to the governing processes of societies and the nature and consequences of the major variations in these processes. The course combines a theoretical and conceptual framework with a study of selected political systems and countries. It is designed to act both as introduction to the discipline for those students who plan to study further and to serve also those students who require a systematic examination of the field in a single course. (6 credits)

POLITICAL SCIENCE L210
International Politics
Prerequisite: Political Science L200 or CEGEP equivalent. This course is designed to offer an introduction to International Politics for Majors and Honours students in Political Science. The course will be devoted to a systematic study of inter-state behaviour both in the period of peace and war. It will include a study of the theoretical approaches, nation-state system, national power and capability, techniques for the management of power, diplomacy and foreign policy, propaganda and psychological warfare, role of International Law and world organization, and world politics. (6 credits)

POLITICAL SCIENCE L220
Canadian Government and Politics
Prerequisite: Political science L200 or CEGEP equivalent. A detailed analysis of the BNA Act. A survey of constitutional development in Canada. An institutional and functional analysis of the executive, legislative, judicial and administrative branches of the Canadian Government. A study of the Canadian political process: the electoral system, political parties, interest groups and public opinion. Seminars on issues and problems in Canadian politics: the constitutional question, economic and fiscal policy, foreign policy: health, education and welfare: pollution, drugs and civil rights. (6 credits)

POLITICAL SCIENCE L221
American Government and Politics
Theory and practice of American government. Attention is given to identifying the values and outlining the character of the American people with emphasis on political behaviour and institutions and the determination and execution of public policy. (3 credits)

POLITICAL SCIENCE L240
The Government and Politics of the Soviet Union
A study of the government and politics of the Soviet Union. Discussion of the basic theories of Communism and the evolution of the Soviet system. (6 credits)

POLITICAL SCIENCE L251
British Government and Politics
Government and Politics in Britain with particular emphasis on political parties and pressure groups, the changing role of the legislature and executive, and the Public Corporations. The issues of current constitutional interest will be discussed such as the office of Prime Minister and parliamentary sovereignty. (3 credits)

POLITICAL SCIENCE L261
International Organization
A survey and analysis of attempts to institutionalize order and change in international society. Chief emphasis will be on the United Nations and its affiliates. (3 credits)

POLITICAL SCIENCE L263
Regional Organizations
A survey and analysis of attempts to institutionalize order and change in international society. Chief emphasis will be on the European Community, COMECON, NATO, OAS, etc. (3 credits)

POLITICAL SCIENCE L291
Ancient Greek Political Philosophy
A study of the political thought of the ancient Greeks with particular attention given to *The Republic* of Plato and *The Politics* of Aristotle. (3 credits)

POLITICAL SCIENCE L293
Roman, Mediaeval and Renaissance Political Philosophy
A study of the political thought of Rome during the Republic, with special emphasis on Cicero's *On the Commonwealth;* the political thought of the mediaeval period with emphasis on St. Augustine's *The City of God* and *The Selected Political Writings* of St. Thomas Acquinas; and the political thought of the Renaissance where the emphasis will be placed on Machiavelli's *The Prince* and *The Discourses.* (3 credits)

POLITICAL SCIENCE L307
Selected Topics in Political Science

Prerequisite: Permission of the Department. The selected topic will vary with the special interest of the instructor offering the course in any given year. (3 credits)

POLITICAL SCIENCE L309
Selected Topics in Political Science

Prerequisite: Permission of the Department. The selected topic will vary with the special interest of the instructor offering the course in any given year. (3 credits)

POLITICAL SCIENCE L311
An Introduction to International Law I

The meaning of international law, its sources, subjects and its relationship with municipal law, recognition, state succession and state territory; rights and duties of states; roles of international law in the international community. (3 credits)

POLITICAL SCIENCE L313
An Introduction to International Law II

International transactions; Evolution and History of Diplomacy; its relationship to international law; diplomacy of the great powers; law and practice as to treaties; disputes, war and neutrality. (3 credits)

POLITICAL SCIENCE L320
Parties, Pressure Groups and Public Opinion

An examination of the functions of party and pressure groups with an emphasis on political socialization and education, ideology, political recruitment and leadership selection, interest aggregation, and intragovernmental organization; of the process of the formulation of public opinion, the nature of its expression, and its impact on public policy; the course will be centered on the Canadian political system. (6 credits)

POLITICAL SCIENCE L324
An Introduction to Law and the Canadian Constitution

An introduction to law in general and the Civil Code, in particular, with references to the Criminal Code, Companies Act and others. This course will also deal with the Canadian Constitutional System and its major interpretations by the Courts. (6 credits)

POLITICAL SCIENCE L328
Public Administration

A theoretical study of government management and institutions, based on the Canadian administrative experience and related to Anglo-American comparative practice. (6 credits)

POLITICAL SCIENCE L331
Statistics for Political Scientists—Theory

This course provides a framework of those statistics useful to political scientists; the theory of statistics, summarization of distributions, measures of association, categories of data, scaling, statistical inference, probability, problems of spurious correlation, and introduction to computer techniques. (3 credits)

POLITICAL SCIENCE L333
Statistics for Political Scientists—Application

This course deals with the most common applications of statistics to political concerns: the structure of quantitative hypotheses and research designs, the construction of opinion surveys and sampling procedures; Guttman scaling, analysis of legislative voting, content analysis of documents, J-curve analysis of political change, factor analysis of international affairs data, simulation and the problems of applying quantitative methods to human beings. (3 credits)

POLITICAL SCIENCE L341
Contemporary Politics of China

An analysis of the present government and politics of the People's Republic of China with special emphasis on the Communist movement, the rise of Mao Tse-tung, the triumph of Communism in China, the role of CCP, political structure and govermental performance, sociopolitical reform, and China and the World. (3 credits)

POLITICAL SCIENCE L343
Contemporary Politics of Japan

An analysis of the political development of Japan since the end of World War II with special emphasis on the construction of new Japan, old and new constitutions, political structure and governmental performance, parties and interest groups, domestic and foreign policies, and Japan and East Asia and the World. (3 credits)

POLITICAL SCIENCE L346
Comparative Government

Prerequisite: Political Science L200 or CEGEP equivalent. A comparative study of the Governments of the United Kingdom, France and the Federal Republic of Germany. (6 credits)

POLITICAL SCIENCE L350
African Government and Politics

The government and politics of African states south of the Sahara with reference to traditional political systems, colonial policies, nationalism, and the problem of nation building (6 credits)

POLITICAL SCIENCE L355
The Middle East in World Politics

Islamic Heritage: Nationalism, Zionism and Contemporary Problems (Arab-Israeli Conflict: U.S.A.-U.S.S.R. Power Struggle). (3 credits)

POLITICAL SCIENCE L357
Mid-East Political Systems

A comparative study of a selected number of Mid-East Governments (Turkey, Egypt, Libya, Syria, Iraq, Lebanon, Israel, Jordan, Saudi Arabia and Yemen). (3 credits)

POLITICAL SCIENCE L371
Nationalism: Origins, Operation, Significance

Prerequisite: Political Science L200 or CEGEP equivalent or permission of instructor. Examines the foundations of nationalist ideology developed originally in the early 19th century as a purely European phenomenon. Considers specific nationalist ideologies—European, African, Asian, etc.—with regard to their modality of operation and their significance in relation to a society's capacity to evolve and confront the demands, both internal and external, of the contemporary environment. (3 credits)

POLITICAL SCIENCE L373
Nationalism, The Canadian Experience

Prerequisite: Political Science L200 or CEGEP equivalent or permission of instructor. Examines the origins and development of nationalism and regionalism in Canada with particular attention centered upon the interaction between French-Canadian and English-Canadian nationalist sentiments. Considers the similari-

ties and divergencies of nationalist and regionalist sentiment in Canada with those of European nationalism, and evaluates their significance with regard to the development of the Canadian federation and its capacity to confront the realities and demands of the modern technological environment. (3 credits)

POLITICAL SCIENCE L380
Politics of Developing Areas

An examination of the effects of social change on political institutions in developing areas. The course will deal with such questions as: How do actions of governments directly influence the process of modernization? How do patterns of governmental organization influence the speed and direction of change? What organs of government seem best able to deal with the increasingly numerous problems caused by modernization? Are specific types of political institutions required for modernization? (6 credits)

POLITICAL SCIENCE L391
Early Modern Political Philosophy

The Reformation and the rise of modern individualism. The principal political thinkers studied in this period will be Luther, Calvin, Bellarmine, Bodin, Hobbes, Harrington, Locke. (3 credits)

POLITICAL SCIENCE L393
Late Modern Political Philosophy

The Enlightenment and its critics and the political thought of the early industrial period. The most important thinkers to be studied in this period are de Montesquieu, Hume, Rousseau, Burke, J. S. Mill and Marx. (3 credits)

POLITICAL SCIENCE L410
Advanced Topics in Political Science

Prerequisite: Permission of the Department. This course is designed primarily for Honours students. Its purpose is to provide an opportunity for students to intensify their study beyond the areas of specialization already represented in the curriculum. The Advanced Topic will vary with the special interest of the instructor offering the course in any given year. (6 credits)

POLITICAL SCIENCE L420
Seminar on Quebec Government and Politics

An institutional and functional survey of the executive, legislative, judicial and administrative branches of the Quebec government. A detailed study of Quebec's jurisdictional and fiscal problems with the federal government. Discussions on the political process in Quebec; the electoral system, political parties, pressure groups and public opinion. The role of the Catholic Church in Quebec politics. A study of the most important thinkers in French Canada. (6 credits)

POLITICAL SCIENCE L424
Seminar on Canadian Federal, Provincial and Municipal Government

A broad survey of the basic constitutional powers under Sections 91-92 of the BNA Act, judicial review, federal-provincial fiscal relations and the state of federalism in Canada today. The main emphasis of the course falls on the provincial-municipal relations, the organization and structure of local government and services, forms of metropolitan and regional government. (6 credits)

POLITICAL SCIENCE L430
Communications and Politics

This course will deal with the subject of communications and politics. Some subjects covered will include; communication and national unity, communications and social mobilization, politics and the mass media, the use of political symbols, communication and authority, cybernetics and systems theory, and the "Canadian School" of culture and communications based on Harold Innis and developed by Marshall McLuhan. Communications theorists covered will include Karl Deutsch, Norbert Wiener, Murray Edelman, Colin Cherry, Hugh Danziel Duncan, David Easton, George Herbert Mead, Harold Innis and Marshall McLuhan. (6 credits)

POLITICAL SCIENCE L434
Contemporary Political Analysis

The course will deal with the question of the epistemological approach to Political Science. The main part of the course will consist of a survey of recent works in empirical political analysis including Deutsch, Easton, Almond, and Verba, Lijphart, Gurr, et al., on contemporary topics of research. (6 credits)

POLITICAL SCIENCE L440
Seminar on Methodology of Political Science

An analysis of the various methodologies in use in Political Science today—with emphasis on the behavioural techniques. The Behaviouralist vs. Traditionalist debate will be explored. Designed for third year Honours students in Political Science. (6 credits)

POLITICAL SCIENCE L442
Seminar on Asian Communism

An intensive analysis of Communism as it relates to the implication of political ideas, institutions, and domestic and foreign policies of East Asian countries. Some of the topics to be examined are: (1) ideological factors, (2) socio-political base, (3) institutional organizations, (4) political leadership, (5) Tactics and strategies, (6) current problems, (7) Communist movement of Non-Communist party-states. (6 credits)

POLITICAL SCIENCE L444
Seminar on the Politics of Eastern Europe

A study of selected problems of government in the Soviet Union and Eastern Europe. Participants must present two major research papers for discussion. (6 credits)

POLITICAL SCIENCE L450
Federalism and the Modern Technological World Society

A consideration of the accrued importance of the federal principle of government in the political organization of humanity resulting from the centralizing and decentralizing influences of modern technology on today's global society. Examines the global problem of co-existence in today's multi-national world society and evaluates the capacity of federalism to assure a certain measure of progress in the political organization of humanity more in accord with the social, economic and technological realities of contemporary world society. Considers federalism's ability to provide mechanisms for absorbing the tensions that can arise from the co-habitation of divergent communities and to

surmount the primordial obstacle that has prevented evolution in the political organization of humanity, namely: mankind's tendency to remain blindly dominated by its various nationalistic passions. Particular attention is given to the Canadian federal system as well as to several other multi-communitary federal states, with regard to the problem of cohabitation in multi-communitary societies. (6 credits)

POLITICAL SCIENCE L460
Seminar on Advanced Political Systems

A seminar on the major political systems with special emphasis on Europe. (6 credits)

POLITICAL SCIENCE L470
Seminar on Government and Economic Policy

A seminar on the role of government in the economic life of different countries; the relation of economic and political power, the changing balance of public and private power in political systems. Emphasis will be on Canadian government and economic policy formation. (6 credits)

POLITICAL SCIENCE L480
Seminar on Legislative, Executive and Judicial Decision-Making

An examination, using Canada as the model, of the formation of decisions in the legislative, executive, and judicial branches of government. Special attention will be given to: the structural-functional approach; developmental analysis of such an explanation of behavioural patterns; and comparative analysis to identify uniformities in patterns of behaviour. (6 credits)

POLITICAL SCIENCE L491
Seminar on Political Theory and Historiography

Prerequisite: Political Science L391 or L393 or History L240. A study of the manner in which political theory regulated historical understanding in Britain in the seventeenth and eighteenth century. The seminar will focus upon the historical writings of the major political thinkers of the period: Coke and the common lawyers, Hobbes, Harrington, Bolingbroke, Hume and others. (3 credits)

POLITICAL SCIENCE L493
Seminar on Modern Political Thought

A study of the main currents in modern political thought in the past century with special emphasis on the outstanding political philosophers of this period. (3 credits)

POLITICAL SCIENCE L499
Honours Political Science Thesis

A required course for third year Honours students in Political Science. At the end of their second year, Honours students must choose, in consultation with their faculty adviser, a research topic for intensive analysis during the third year. The completed thesis will be presented to the Department at the end of the third year. (3 credits)

51.24 Department of Psychology

Associate Professor and Chairman
M. L. SHAMES

Professor
H. W. LADD

Associate Professors
P. BABARIK
J. H. BAUER
R. M. LAMBERT
V. MAHEUX

Assistant Professors
M. BROSS
H. I. GLAZER
E. MOULEDOUX
Y. L. PERRAULT
R. D. SEENS
F. SPRINGSTON

51.24.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1.

The superscript indicates credit value.

60 BA Honours in Psychology

Year I
12 Psyc L202[6], L203[3], L205[3]
Year II
6 Psyc L301[3] and L303[3], or Psyc L301[3] and L305[3], or Psyc L301[3] and L309[3]
Year III
12 Psyc L400[6], L402[6]
30 Psyc Elective credits in any year, of which:
12 are from Category I courses
12 are from Category II courses
6 are from Either I or II

NOTE: Of these electives, 12 credits shall be 300 or 400 level courses.

60 BA Specialization in Psychology

Year I
12 Psyc L202[6], L203[3], L205[3]
Years II and III
6 Psyc L301[3] and L303[3], or Psyc L305[3] and L307[3], or Psyc L307[3] and L309[3], or L301[3] and L305[3], or Psyc L301[3] and L309[3]
42 Psyc Elective credits, of which:
12 are from Category I courses
12 are from Category II courses
18 are from Either I or II

NOTE: Of these electives, 12 credits shall be 300 or 400 level courses.

75 BSc Honours in Psychology

Year I
12 Psyc L202[6], L203[3], L205[3]
9 (Bio 321A/B[3], Chem 326A[3], 328B[3]) or (Math 305A[3], 321A[3], Phys 301A[3])
Year II
6 Psyc L301[3] and L303[3], or Psyc L301[3] and L305[3], or Psyc L301[3] and L309[3]
Year III
12 Psyc L400[6], L402[6]
6 Science Elective credits
30 Psyc Elective credits in any year, of which:
18 are from Category I courses
12 are from Category II courses

NOTE: Of these electives, 12 credits shall be 300 or 400 level courses.

69 BSc Specialization in Psychology

Year I
12 Psyc L202[6], L203[3], L205[3]
9 Bio 321A/B[3], Chem 326A[3], 328B[3] or Math 305A[3], 321A[3], Phys 301A[3]
Years II and III
6 Psyc L301[3] and L303[3], or Psyc L305[3] and L307[3], or Psyc L307[3] and L309[3], or Psyc L301[3] and L305[3], or Psyc L301[3] and L309[3]
42 Psyc Elective credits in any year, of which:
24 are from Category I courses
12 are from Category II courses
6 are from Either I or II

NOTE: Of these electives, 12 credits shall be 300 or 400 level courses.

69 BSc Specialization in Psychology and Biology

Year I
12 Psyc L202[6], L203[3], L205[3]
6 Chem 326A[3], 328B[3]
3 Bio 321A/B[3]
Year II
12 Bio 420Z[6], 430Z[6]
Year III
12 Bio 440Z[6], 524Z[6]
24 Psyc Elective credits in any year, of which:
12 are from Category I courses
12 are from Category II courses

NOTE: Of these electives, 12 credits shall be 300 or 400 level courses.

51 BSc Major in Psychology

Year I
12 Psyc L202[6], L203[3], L205[3]
9 Bio 321A/B[3], Chem 326A[3], 328B[3]; or Math 305A[3], 321A[3], Phys 301A[3]
Years II and III
30 Psyc Elective credits, of which:
18 are from Category I courses
12 are from Category II courses
NOTE: Of these electives, 12 credits shall be 300 or 400 level courses.

42 BA Major in Psychology

Year I
12 Psyc L202[6], L203[3], L205[3]
Years II and III
30 Psyc Elective credits, of which:
12 are from Category I courses
12 are from Category II courses
6 are from Either I or II
NOTE: Of these electives, 12 credits shall be 300 or 400 level courses.

51.24.2 DEPARTMENT OF PSYCHOLOGY

The Department of Psychology offers a programme leading to a BA and a BSc with a Major, Honours degree or Specialization in Psychology. The BSc programme (Major, Honours, or Specialization) offers two options; either Chemistry-Biology or Mathematics-Physics. In addition, there is a BSc Specialization in Psychology and Biology. Double Majors with other departments can be arranged. The curriculum is designed to provide for a broad general education, as well as to give adequate preparation for graduate studies in Psychology. Although some courses in Applied Psychology are offered, the major emphasis of the programme is theoretical and experimental.

Students entering the Arts or Science programme in Psychology must have satisfied the admission requirements as outlined in § 51.2. Students wishing to take Psychology L406, Directed Readings, should prepare, before the beginning of the Fall term, a list of books that have relevance to the problem area undertaken for study by the student. For courses at the 300 and 400 level, there are specific prerequisites. *The relevant prerequisites are listed with each course. Students wishing to take these courses who do not have the necessary prerequisites may register for the course with approval of the instructor.* Students in their third year are to take Psychology courses only at the 300 and 400 levels. *Among their Psychology electives, all Honours, Major, and Specilization students must choose a specified number of credits from both Category I and Category II.*

Category I	Category II
L210[6]	L204[6]
L212[6]	L206[6]
L215[3]	L208[6]
L300[6]	L213[3]
L301[3]	L302[6]
L303[3]	L304[6]
L305[3]	L306[6]
L307[3]	L310[6]
L308[6]	L317[3]
L309[3]	L319[3]
L312[6]	L408[6]
L313[3]	
L314[6]	
L315[3]	
L404[6]	

NOTE: Science electives must be chosen from the following departments: Physics, Chemistry, Biology, Geology, Mathematics.

Description of the Major Programme

A Major consists of a minimum of 42 credits in Psychology for both the BA and the BSc, including Psychology L202, L203 and L205 in the first year. These courses will provide the student with practical experience in psychological research of all types, and an understanding of the philosophical and scientific origins of Psychology and of the epistemological basis of scientific research methodologies. In addition, the BSc programme requires nine Science credits in either Chemistry and Biology or in Mathematics and Physics.

Description of "Specialization" Programme

The department offers a "SPECIALIZATION" in both Arts and Science, which affords a greater degree of specialization in the field than does a Major programme. A total of 60 credits in Psychology are required, including L202, L203 and L205 in the first year and six credits chosen from one of five streams in the second year. In addition, the "SPECIALIZATION" in science includes nine required credits from either Biology and Chemistry or Mathematics and Physics.

Description of the Honours Programme and Special Requirements

The department offers an Honours degree in both Arts and Science. Honours represents a greater degree of specialization in the field than a Major programme allows and is an indication of higher academic standing. In order to be admitted to the programme a student must have met the same criteria which define the successful Honours student. A successful Honours student must achieve and maintain a minimum grade of 70% in each of his Psychology courses and a minimum grade of 55% in non-Psychology courses, an average of 75% in Psychology courses and a 73% overall average. A student not meeting these requirements will lose his Honours status, but may continue in the Major programme.

Acceptance for the Honours Programme will depend upon performance during the first University year.

Students wishing to register for Honours must apply at the end of the first year and not later than registration time in the second year. It is possible, however, for a student who, although he may not have been registered as an Honours student, nonetheless has the necessary requirements, to enter the programme at any time before registration for the final year. The standing of Honours students will be reviewed each year by the

department. Those students wishing to apply for admission should obtain an application form from the secretary's office, B-306, Bryan Building. The completed application together with one copy of the applicant's latest transcript of grades must be filed with the secretary. All applicants will be notified in writing of their acceptance or non-acceptance into the Honours programme. Successful applicants will be required to meet with a faculty sponsor to work out their course programme. Successful candidates for the Honours degree will be required to complete 102 credits as opposed to 90 credits required in the Majors programme. The twelve extra credits required of all Honours candidates consist of: 1) a seminar course, and 2) an Honours Thesis. These two extra courses will be taken in the candidate's final year.

Psychology L402, Honours Seminar, is a course for Honours students only.

NOTE: A cognate elective is to be decided upon in concert with the Department.

51.24.3 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.5.

PSYCHOLOGY L200
Introductory Psychology

This course is intended for the general Arts and Science student. In addition to introducing some major ideas and findings of Theoretical Psychology, we will examine the advantages and strengths of a behaviouristic approach which studies man as an organism by means of the experimental methods of the biological and social sciences. We will also explore some esoteric psychologies. This course does not constitute a Psychology credit for the Psychology Major or Honours student. *Lectures:* 3 hours per week for two terms or six hours per week in the second term. (6 credits)

NOTE: This course may not be taken for Psychology credit by Psychology students.

PSYCHOLOGY L202
Historical Approach to Systematic Psychology

this is a comprehensive course which is intended to give an appreciation of how and why Psychology developed as it did in relation to historical-cultural milieux, major trends in intellectual history, contending philosophical assumptions and technical and methodological developments. *Lectures:* 3 hours per week for two terms. (6 credits)

PSYCHOLOGY L203
Statistics

Material presented in this course will include: Probability theory, frequency and probability distribution, measures of central tendency and dispersion, theory of sampling distributions, normal distributions, theory of hypothesis testing and the theory of inferences about population means. This material is intended to provide both a theoretical and a practical foundation in statistics for the student interested in conducting or utilizing the results of psychological research. *Lectures:* 3 hours per week, second term. (3 credits)

PSYCHOLOGY L204
Human Motivation

This course will consider determinants of human motivation. Theories of human motivation will be studied and evaluated. *Lectures:* 3 hours per week for two terms. (6 credits)

PSYCHOLOGY L205
Research Methods

A lecture and laboratory course in basic methods used in psychological research. Students will be required to design, conduct, analyse and report on a number of experiments. Required course for all majors in Psychology. *Lectures:* 3 hours per week, first term. *Lab:* 3 hours per week, first term. (3 credits)

PSYCHOLOGY L206
Developmental Psychology

A study of physical, cognitive, emotional and social development, with emphasis on childhood, adolescence and normal development, with some consideration of age-related deviant patterns. The course is given in lecture style, but with weekly informal workshops on special interest areas and on the development of students' skills in observational methods. Students are required to carry out observations of children in a variety of natural settings. *Lectures:* 3 hours per week for two terms. (6 credits)

PSYCHOLOGY L208
Personality: Normal and Abnormal

The organization, functioning and development of personality will be elaborated according to personality theories. Evidence from experimental and field studies which are relevant to personality will be related to the basic theoretical development. *Lectures:* 3 hours per week for two terms. (6 credits)

PSYCHOLOGY L210
Sensation and Perception

In this course the importance of sensory systems in interpreting (perception) as well as receiving (sensation) information about the external world will be considered. The psychophysical study of the five human senses will be complemented by behavioural and neuro-physiological studies in animals. General principles of sensory function and their interrelationships will be stressed. *Lectures:* 3 hours per week for two terms. (6 credits)

PSYCHOLOGY L212
Learning

The course is a study of behaviour in terms of the principles of conditioning and learning. The first half of the course is concerned with the basic issues central to conditioning and learning. In the second half the emphasis is on human learning. *Lectures:* 3 hours per week for two terms. *Lab:* To be scheduled during regular classes. (6 credits)

PSYCHOLOGY L213
Psychology in Action: Developments in the Science and Application of Psychology

"Psychology is a heterogeneous science". This fact is represented by subdividing the American Psychological Association into 30 divisions of interest. The origins of each psychology speciality will be determined and the changes leading to the actual nature of each psychology field will be covered. There will be a seminar/lecture format. *Lectures:* 3 hours per week, first term. (3 credits)

PSYCHOLOGY L215
Anatomical and Physiological Bases of Motivation and Emotion I

An introduction to the gross structure and physiological functions of the central nervous system in relationship to behaviour. Consideration will be given to phylogenetic development, sensory and motor systems, and functional disorders of brain damage. This course is a prerequisite for Psychology L313. *Lectures:* 3 hours per week, first term. (3 credits)

PSYCHOLOGY L300
History of Psychology

Prerequisites: Psychology L202, L203, L205. A survey of the historical antecedents of modern theoretical and applied psychologies with application of the historical perspective to understanding the twentieth century systems of psychology and some contemporary theories, methods, issues and trends within the discipline. The course is given in seminar style with at least one written paper. *Lectures:* 3 hours per week for two terms. (6 credits)

PSYCHOLOGY L301
Statistics II

Prerequisites: Psychology L203, L205. Material presented in this course will include: "chi-square" and "F distributions", the "fixed effects" models for analysis of variance, regression and correlation. "Chi-square" tests and non-parametric tests of hypotheses. This material is intended to provide both a theoretical and a practical foundation in statistics for the student interested in conducting or utilizing the results of psychological research. *Lectures:* 3 hours per week, first term. (3 credits)

PSYCHOLOGY L302
Social Psychology

Prerequisite: Psychology L202. An introduction to the methodology, concepts, and research in some areas of contemporary social psychology. Group dynamics such as coalition formation, group problem-solving, communication networks, and leadership will be considered along with social influences such as interpersonal perception, conformity, attitude development and change and aggression. *Lectures:* 3 hours per week for two terms. (6 credits)

PSYCHOLOGY L303
Research Methods II

Prerequisites: Psychology L203, L205, L301. This course is a continuation of Research Methods I. This part of Research Methods will be devoted to a critical examination of more complex experimental designs used in Psychology. Students will be required to design, conduct, and evaluate experiments, and an opportunity will be provided for independent research. *Lectures:* 3 hours per week, second term. *Lab:* 3 hours per week, second term. (3 credits)

PSYCHOLOGY L304
Practicum in Early Childhood Development

Prerequisites: Psychology L202, L206. This course combines an intensive study of development in early childhood with practical experience in a pre-school. In addition to one class meeting per week, each student must be able to commit himself or herself to three hours per week of observation and work as a teacher's aide in the college-related day nursery. After an introductory study of nursery school philosophy and observational methods, weekly seminars and readings will focus on aspects of child development which are observable in the nursery school, such as motor development, language, play, social interaction, concept formation, use of art and play materials, behaviour in routine situations, etc. The course assumes previous course work in developmental psychology or its equivalent. *Lectures:* 3 hours per week for two terms. (6 credits)

PSYCHOLOGY L305
Scaling

Prerequisites: Psychology L202, L203, L205. This course is designed to introduce the student to theory and methods, i.e., fractionation and equisection methods, etc. This course will appeal to those students interested in attitude measurement and test construction. *Lectures:* 3 hours per week for one term. *Lab:* Possible seminars and/or labs. (3 credits)

PSYCHOLOGY L306
Community Psychology

Prerequisite: Psychology L202. This course will relate psychology to the problems of man-in-society and consider basic areas of psychological knowledge as they bear upon the behaviour of man-in-institutions: that is, the strategies that man used to create a habitat which in turn determines his development. The contributions of psychology to community leadership in the search for new and better personal, social, cultural and ecological arrangements will be considered as they relate to such institutions as industry, education and the health, welfare and political structures. *Lectures and seminars:* 3 hours per week for two terms. (6 credits)

PSYCHOLOGY L307
Measurement

Prerequisites: Psychology L202, L203, L205. This course will define fundamental, derived and "pointer" measurement in science; and will examine the nature of psychological tests as "pointer" measures. The notion of "uniqueness" of a scale will be defined and related to the feasibility of performing arithmetic operations on measurement scores. *Lectures:* 3 hours per week for one term. (3 credits)

PSYCHOLOGY L308
Human Information Processing

Prerequisite: Psychology L202. Examines the way in which sensory input is transformed, recognized, stored, recovered and used. The course looks at pattern and speech recognition, memory and attention, decision-making and reasoning in the context of recent experimental and theoretical work. *Lectures:* 3 hours per week for two terms. (6 credits)

PSYCHOLOGY L309
Field Research Methodology

Prerequisite: Psychology L202. Introduction to issues, rationales and techniques of analyses of complex behaviour in non-laboratory, field settings. Examples for study will be drawn from applied fields such as community and social issues, clinical and counselling, psychology, education, and industry. *Lectures:* 3 hours per week for one term. *Labs:* to be arranged. (3 credits)

PSYCHOLOGY L310
Behaviour Disorders

Prerequisite: Psychology L208. Offered primarily to students in psychology. Designed to acquaint the student with contemporary approaches to abnormal psychology. The course will include discussion of a broad range of abnormal behaviour patterns, including the psy-

choneuroses, psychoses, psychosomatic disorders, conduct disorders and maladaptive group behaviour. Problems of causality, classification, assessment and treatment will be elaborated. Attention will also be given to new perspectives on prevention of disordered behaviour. *Lectures:* 3 hours per week for two terms. (6 credits)

PSYCHOLOGY L312
Animal Behaviour

Prerequisite: Psychology L202. The study of animal behaviour, its description, function and causes from a comparative bio-psychological point of view. *Lectures:* 3 hours per week for two terms. Possibly seminars and/or labs scheduled during regular lecture periods. (6 credits)

PSYCHOLOGY L313
Anatomical and Physiological Bases of Motivation and Emotion II

Prerequisite: Psychology L215. A study of determinants: neural, hormonal, stimulus, experiential of behaviour. Emphasis will be on factors which account for the initiation, direction, and regulation of behaviour. Animal and human research data underlying major psychological theories of motivated behaviours will be emphasized. *Lectures:* 3 hours per week, second term. (3 credits)

PSYCHOLOGY L314
Physiological Psychology

Prerequisites: Psychology L202, L203, L205, L215. A study of some biochemical and physiological mechanisms underlying behaviour. The topics studied include enzymes, nucleic acids, the nervous, endocrine and sensory systems, response mechanisms, emotions. etc. A good background in biology, through not required, is strongly recommended. *Lectures:* 3 hours per week for two terms. (6 credits)

PSYCHOLOGY L315
Psychology of Time

Prerequisite: Psychology L202. A basic framework for behaviour is time. A review of psychological studies of time from the beginning of the scientific study of psychology will be undertaken. Experiments and theory will be considered in the frames of reference of biological, psychophysical, psychoanalytic, and social psychology. An experiment which may replicate a previous study will be carried out. *Lectures:* 3 hours per week, second term. (3 credits)

PSYCHOLOGY L317
The Psychology of Communication and Language

Prerequisite: Psychology L202. This course will deal with nonverbal communication systems among infrahuman and human organisms. Primary emphasis, however, will be laid upon language which will be treated in terms of its structures and functions. Topics chosen from among language acquisition, theories of meaning and the use of language, types of language classification, language and socialization and other cognitive dimensions of language. *Lectures/seminars:* 3 hours per week, first term. (3 credits)

PSYCHOLOGY L319
Psycholinguistics

Prerequisite: Psychology L202. This course will begin by introducing the student to the general ideal of "a grammar" and will then proceed to the following topics:
(a) Constituent Structure and Transformational Grammars,
(b) Cognitive Implications of Transformational Grammars,
(c) The Concept of a "Morpheme" and its Meaning, and
(d) Phonetics, Phonemics and Speech.
Lectures: 3 hours per week, second term. (3 credits)

PSYCHOLOGY L321/L323
Selected Topics in Psychology

Prerequisite: Permission of the instructor. Subject matter will differ from one offering to another. The course provides students with an opportunity for advanced study in a field of current research importance. (3 credits each)

PSYCHOLOGY L400
Honours Thesis

This course will require the Honours student to propose and complete a research thesis according to the APA format. The student's work will be supervised by a Thesis Chairman, selected from within the department by the student, and at least one additional member of the departmental staff selected jointly by the Thesis Chairman and the student. Required of all third year Honours students and open to Qualified Majors who have completed Psychology L202, L203, L205, L301 and L303, and who have permission of faculty. (6 credits)

PSYCHOLOGY L402
Honours Seminar

This course will consist of a sequence of topical lectures or discussions conducted by the departmental staff. Topics will be of a contemporary nature, and will focus on current research. (6 credits)

PSYCHOLOGY L404
Mathematical Theories of Behaviour

Prerequisites: Psychology L202, L203, L205, L301, L303 or instructor's permission. This course is intended to demonstrate how mathematical concepts and techniques are employed in the formulation of psychological theories. Theories of simple learning, perception, decision-making and reasoning will be examined. The course pre-supposes no particular background in mathematics and will be taught at a level of mathematical sophistication determined by the skills that students bring to it. It is a course that may be of interest to the general student of Science, or the psychology student seriously concerned with problems in theoretical psychology. *Lectures:* 3 hours per week for two terms. (6 credits)

PSYCHOLOGY L406
Directed Readings

This course is designed for the exceptional, advanced psychology student (3rd year Major and Honours only) who wishes to do independent literature research on a specific topic in psychology. This research will culminate in a written paper. Students should have a well defined research topic before they register for this course. Final acceptance to this course is subject to department approval. Seminars to be scheduled individually. (6 credits)

PSYCHOLOGY L408
Community Psychology Practicum

Prerequisite: Psychology L306. The student will operate as an enabler or technical assistant to a community action agency applying community psychology principles. He will develop and maintain an information system or equivalent programatic activity for his host agency and be descriptively evaluated by his agency as well as by the professor. *Lectures:* 3 hours per week for two terms. (6 credits)

PSYCHOLOGY L421/L423
Advanced Topics in Psychology

Prerequisite: Permission of the instructor. Subject matter will differ from one offering to another. The course provides students with an opportunity for advanced study in a field of current research importance. (3 credits each)

51.25 Department of Sociology

Associate Professor and Chairman
G. DEWEY

Associate Professors
E. S. DRYSDALE
K. KUSANO
J. F. TASCONE

Assistant Professors
D. CZARNOCKI
E. GAVAKI
S. HLOPHE
H. HORWICH
G. LECAVALIER
C. LIPSIG-MUMMÉ
B. PETRIE
J. TRESIERRA

51.25.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1.

The superscript indicates credit value.

60 BA Honours in Sociology

Year I
18 Soc Elective credits [see § 51.25.2 (A. & C.)]
Year II
6 Soc L300[6]
6 Soc L330[6]
6 Soc L350[6]
6 Soc Elective credits [see § 51.25.2 (D.)]
Year III
6 Soc L400[6]
6 Soc L450[6]
6 Soc Elective credits [see § 51.25.2 (E.)]

42 BA Major in Sociology

Year I
12 Soc Elective credits [see § 51.25.2 (B. & C.]
Year II
6 Soc L300[6]
6 Soc L330[6]
6 Soc L350[6]
Year III
6 Soc L400[6]
6 Soc Elective credits [see § 51.25.2 (E.)]

51.25.2 DEPARTMENT OF SOCIOLOGY

The Department of Sociology offers programmes leading to a Major or Honours degree. One or more of the following guidelines will be applied in decisions regarding the registration of students in programmes or specific courses in the Department.

A. Honours and Majors who have completed an Introductory Sociology at CEGEP or elsewhere are encouraged to take Sociology L203 and L205 plus the appropriate number of general electives and electives in Sociology.

B. Honours and Majors who have not completed an Introductory Sociology at CEGEP or elsewhere should register in Sociology L201 in the First Term and Sociology L203 and/or L205 in the Second Term, plus the appropriate number of general electives and electives in Sociology. Sociology L201 is intended to accommodate students who enter university at mid-year and others who wish to acquire the prerequisite credits for subsequent study in Sociology during 1978-79.

C. University I students are usually limited to the Sociology 200 level courses in choosing their electives.

D. University II students may choose their electives in Sociology from those of the 200 and/or 300 level courses.

E. University III students may choose their electives in Sociology from the 300 and/or 400 level courses. One cognate course may be included with departmental approval.

F. The elective Sociology courses should be distributed among the three university levels.

G. Students seeking admission to the Honours programme on or after June 1st 1977 will be bound by the Honours requirements outlined in § 16.2.4 of this Calendar. Students who already had Honours status by June 1st 1977 will continue to be governed by the requirements which applied at the date of their admission to the Honours programme.

51.25.3 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.5.

SOCIOLOGY L201
Introduction to Sociology

A survey type course which examines society in terms of social structure and social processes using the basic concepts of scientific Sociology. A preliminary examination of the substantive areas of social life is undertaken, i.e., the family, socialization, religion, stratification, social control and deviance, education, economic systems and political institutions, etc. (3 credits)

SOCIOLOGY L202
Canadian Society

Prerequisite: Sociology L201. First part of the course will be spent developing a theoretical framework — the "hinterland-metropolis" perspective — which will be used to examine the dynamics of different "inter-groups" in Canada. This will be done within the context of three basic structures, economic, political and regional. The second part of the course will be concerned with applying this metropolis-hinterland framework to *two* specific areas from the following: multinational corporations and underdevelopment, agrarian protest movements, community studies in Canada, Canadian identity and regional disparity, native peoples, and third Party political movements in Canada. (6 credits)

SOCIOLOGY L203
Social Organization

Prerequisite: Sociology L201 or the equivalent. Examines the main concepts and basic characteristics of social organization in comparative and evolutionary perspectives. Emphasis will be upon the presentation of a basic conceptual framework with which to examine the specific forms of and changes in the comprehensive pattern of social organization. (3 credits)

SOCIOLOGY L204
Quebec Society

Prerequisite: Sociology L201. Is Quebec a region or a society? Within the context of the trend towards continental integration, this course studies the evolution of Quebec class structure and economic and social institutions from New France to the present. Throughout, the unifying theme is the interplay between external forces and internal developments, the relationship between Quebec and Greater North America. Of special importance is the development of the distinct rural and urban societies during the 19th century, their interdependence and the social conflict which accompanied their fusion during the 20th century. The impact of rapid urbanization on power relationships both within Quebec and between Quebec and English Canada follows. This course ends with an assessment of Quebec's potential as an independent society. (6 credits)

SOCIOLOGY L205
Individual and Society

Prerequisite: Sociology L201 or the equivalent. This course focuses upon the relations between individuals and their social environment which includes the family, peer groups, social movements, government and other large organizations. Selected theoretical orientations and research methods are considered and discussed in conjunction with findings of various studies. (3 credits)

SOCIOLOGY L206
Socialization

Prerequisite: Sociology L201. An examination of the social and cultural processes by which the individual becomes a functioning member of society. Among the perspectives considered are the symbolic interactionist theories of Cooley and Mead, the psychological theories of Freud and Erikson, and the sociological theories of Parsons, Elkin, Clausen, Inkeles, Brim, Wheeler and others. Emphasis is also given to adult socialization and re-socialization in such diverse institutional contexts as the school, occupations and professions, hospitals, prisons, the army, etc. The relation of social structure to role acquisition and role performance constitutes a major focus of the course. (6 credits)

SOCIOLOGY L207
Sociology of Deviance

Prerequisite: Sociology L201 or equivalent. An examination of the nature, forms, sources, functions and dysfunctions of deviations from social norms, and the mechanisms of social order and control. Deviance is viewed as a social process of action, interaction and relationships that derive from the social structure and have consequences for it. Various forms of deviance, from extreme under-conformity to extreme over-conformity are considered in terms of contemporary social theory and research. (3 credits)

SOCIOLOGY L209
Sociology of Crime and Delinquency

Prerequisite: Sociology L201 or equivalent. An analysis of the concepts of "crime" and "delinquency", and the criminal-justice and juvenile-justice systems. The extent and distribution of crime and delinquency are considered, as well as the various sociological and psychological perspectives of contemporary theory and research. Emphasis will be given to an examination of the social policy on crime and delinquency as manifested in societal programs of treatment and control. (3 credits)

SOCIOLOGY L211
Race and Ethnic Relations

Prerequisite: Sociology L201. Explores the emergence of contemporary ideas about skin colour and ethnic or national group sentiment as they re-shape the social landscape determining ways of individual and collective behaviour as well as self-perception. The course is designed to allow the students to more easily comprehend the ideas of race and culture through the exploration of discrimination, prejudice and intergroup accomodation and studies of the role of these ideas in other societies, at other historical periods, as well as our own society in present time. (3 credits)

SOCIOLOGY L213
Social Stratification

Prerequisite: Sociology L201 or equivalent. An examination of the major stratification systems — caste, estate, class in their social and historical contexts. Consideration of various theoretical and empirical approaches to stratification with emphasis on contemporary societies. (3 credits)

SOCIOLOGY L214
Marriage and the Family

Prerequisite: Sociology L201. Sociological study of marriage and the family. Earlier phases of course will deal with personality formation within the family, dating and marriage, marital adjustment and problems in marriage generated by social change. Later phase of course will entail an analysis of the family as a basic social institution within a structural-functional framework. Patterns of interaction between family members and between the family and other institutions will be examined. Sources of strain and tension in such relationships will be discussed. (6 credits)

SOCIOLOGY L300
Methodology of Sociology

Prerequisite: Sociology L201 or the equivalent plus University II standing. A survey of problems and issues in the philosophy of social research, consideration of the relation between sociological theory and research and examination of the major methodologies in Sociology. (6 credits)

SOCIOLOGY L302
Social Psychology

Prerequisites: Sociology L201 plus University II standing. Human beings change as to their definitions of reality as they interact with others. In this course the focus will be on the reciprocal relationships between the individual and social matrix as they impinge upon each other. Concepts and theories regarding the self, personality, significant others groups, attitudes, etc., will be explored. (6 Credits)

SOCIOLOGY L304
Sociology of Urban Regions

Prerequisite: Sociology L201 or the equivalent plus University II standing. The first semester will be devoted to the historical development of the city, focusing on an analysis of the pre-industrial city from a cross-cultural perspective. The second semester will study the growth of urbanization in North America, concentrating on Canada and the social and spatial organization of Canadian cities. Focus will be on the problems that industrial Canada faces, and an exploration of the nature of these problems in the politico-economic organization of the nation. The ideologies of planning and urban renewal will be critically evaluated, especially as they are manifested in the functioning of the Montreal Urban Community. Finally, an analysis of citizens' groups and community organization in Canadian cities will be offered. (6 credits)

SOCIOLOGY L310
Social Movements in Quebec

Prerequisite: Sociology L201 or the equivalent plus University II standing. Analysis of major movements for social change that have developed historically in Quebec. Concentration on the rebellion for economic independence 1837; the Louis Riel affair; the anti-conscription movements, Catholicism and the organizing of youth, the labour movement and the separatist movement RIN through Quebec. (6 credits)

SOCIOLOGY L316
Economy and Society

Prerequisites: Sociology L201 or the equivalent plus Soc L203 or the equivalent. Examines the relationship between the organization of man's economic life and the range of his social possibilities. The course emphasizes the examination of the ways in which economic activities are legitimated or otherwise affected by social norms and values and of the ways in which various social systems react to the strains created by the accommodation of new technology and of new industrial organizations. (3 credits)

SOCIOLOGY L318
Complex Organizations

Prerequisites: Sociology L201 or the equivalent plus Soc L203 or the equivalent. Presents a sociological analysis of some of the main facets of large and complex organizations. Examines the nature and types of these organizations, various aspects of their internal structure and the relationships between them and their social environment. (3 credits)

SOCIOLOGY L320
Social and Cultural Anthropology

Prerequisites: Sociology L201 or the equivalent plus University II standing. An analysis and description of the social structure, ritual, symbolism, kinship and political systems of Complex Societies. Special emphasis is laid on Afro-American Anthropology, the Native Peoples of Canada and African traditional political systems. Modern myths on the occult. Edward T. Hall's *Silent Language* and Edmund Carpenter's *Anthropologist in the Electronic World* also constitute an integral part of this course. (6 credits)

SOCIOLOGY L321
Sociology of Economic Development

Prerequisite: Sociology L201 or the equivalent plus University II standing. A look at the theories and models of economic development with special reference to the metropoli-satellite model of multinational corporation monopoly capitalism. Developmental processes of foreign aid, Peace Corps and CUSO Volunteerism, the role of local political elites and self-reliance are critically analyzed as possible alternatives of obstacles to economic development. (3 credits)

SOCIOLOGY L323
Population

Prerequisites: Sociology L201 or the equivalent plus University II standing. A theoretical approach to current issues related to the determinants and consequences of population structure and dynamics. Emphasis will be given to the relationship between economic development and population growth. (3 credits)

SOCIOLOGY L325
Sociology of Religion

Prerequisites: Systematic Sociology L201 or the equivalent plus University II standing. Analysis of religious experience, beliefs, ritual, and organizations as social facts. Consideration of both traditional and contemporary religious institutions as sources of meanings and values which may either support or subvert ongoing social structures. Attention also given to how non-religious situations generate religious movements and reversely, how religious situations generate non-religious (i.e., social, economic, political) movements. (3 credits)

SOCIOLOGY L327
Sociology of Labour and Capital in Quebec

Prerequisites: Sociology L201 or the equivalent plus University II standing. Study of the development of the labour force, the evolution of workingmen's organizations, the clash between American and domestic unions; the evolution of the new working class; the relations between the state and the labour movement. (3 credits)

SOCIOLOGY L329
Human Ecology

Prerequisite: Sociology L201 plus University II standing. This course will focus on the analysis of social organization as a mechanism of interrelationship between human population and environment. It places particular emphasis on the ways in which human populations live in their community, the forms and patterns of development of the human community, the organization and differentiation of functions within the community and the impact of technology and population growth on the spatial and temporal patterning of social relationships. (3 credits)

SOCIOLOGY L330
Classical Social Theory

Prerequisite: Sociology L201. Examination of the origins of Sociology and of the sociological works of nineteenth and early twentieth century European theorists, with consideration of the social and political context. Particular emphasis will be given to the works of Durkheim, Marx and Weber. Reading will include primary sources and critical commentaries. Required of all Major and Honours students in Sociology. (6 credits)

SOCIOLOGY L343
(Also given as Interdisciplinary Studies L343)
Sociology of Leisure

Prerequisite: Sociology L201 or permission of the instructor. Second year course, compulsory for Recreation students and elective for all students. This course deals with leisure and recreation in the context of industrial-urban social structures. It entails a sociological approach to the analysis of leisure and recreational activities as affected by contemporary social, economic, and political institutions. Critical emphasis shall be placed on the historical changes in leisure as a social reality with particular attention to the structural properties of alienation, anomie and inequality in modern social and cultural milieux. (3 credits)

SOCIOLOGY L350
Sociological Statistics

Prerequisites: Sociology L201 or the equivalent plus University II standing. This course will deal principally with aspects of measurement in Sociology. The first part will be devoted to the discussion of descriptive statistics in terms of scaling techniques, measures of central tendency, dispersion, location, and numerical analysis of sociological data. The second part will cover inferential statistics. The principal topics to be discussed will be probability theory, sampling procedures, testing hypothesis and correlational analysis. (6 credits)

SOCIOLOGY L360
Topical Seminar in Sociology

Prerequisites: Sociology L201 or the equivalent plus University II standing. Restricted to Sociology Majors and Honours. Seminar focusing in special sociological topics or areas as designated by those instructors offering such seminars in a given year. For further information consult the Departmental Curriculum Addendum published in spring. (3 credits)

SOCIOLOGY L400
Contemporary Social Theory

Prerequisites: Sociology L201 or the equivalent plus University III standing. Critical examination of contemporary social theories against the background provided by Marx, Durkheim, Weber. Major attention will be given to the critical assumptions, conceptual distinctions, methodological features and ethical implications of theories. Course will require extensive reading, critical papers and other assignments including class presentations. (6 credits)

SOCIOLOGY L401
Social Change

Prerequisites: Sociology L201 plus University III standing. The course examines the sources, mechanisms and consequences of social and cultural change; it includes classical and contemporary theories of change and important theoretical and empirical studies in this area. (3 credits)

SOCIOLOGY L402
Sociology of Work

Prerequisites: Sociology L201 or the equivalent plus University III standing. First Semester — a macro analysis of the theory and practice of work as it has evolved in western society. Focus will be on tracing the change in the nature of work — the emergence of class, changes in work relationships, in the concepts of leadership, authority, and decision-making — as these are influenced by the emergence of the monopoly capitalist system. Second Semester, a micro analysis of the nature of work in North American Industrial Society. Special emphasis will be placed on comparing the Blue and White Collar worlds of work. The key problems of alienation, automation and powerlessness will be explored. A survey of worker response to these problems will conclude the course. (6 credits)

SOCIOLOGY L403
Sociology of Knowledge

Prerequisites: Sociology L201 or equivalent plus University III standing, or permission of the Department. Study of the relationship between ideas and social structure. Consideration of classic and modern sociological theories on the construction, maintenance, justification, subversion, and change of socially shared ideas about reality. Primary objective of the course will be the use of perspectives derived from the sociology of knowledge in the analysis of social reality presently found in social, political, religious and economic contexts. (3 credits)

SOCIOLOGY L404
Sociology of Economic Change in Quebec

Prerequisites: Sociology L201, L204, or the equivalent plus University III standing. Study of Quebec economic institutions as developing historically. Special emphasis on internal colonization and external dependence. To be focused on macro analysis. (6 credits)

SOCIOLOGY L406
Sociology of Women

Prerequisites: Sociology L207 or the equivalent plus University III standing. An examination of the status of women in North American society — especially regarding socialization, marriage and the family, education, religion and the law. Within an historical and comparative framework, consideration will be given to the ideology of sexism, revolution, life cycles and socio-economic and ethnic dimensions as well as Woman's Liberation as a social movement. (6 credits)

SOCIOLOGY L421
Sociology of Education

Prerequisites: Sociology L201 or the equivalent plus University III standing. An analysis of

the social relationships emerging within a formal education system. The concept of education as a powerful tool for socialization and social control will be explored. Special emphasis will be placed on alternative approaches to the present formal structure, i.e., "living-learning", independent study, etc. The phenomena of technology and depersonalization in education are also examined. (3 credits)

SOCIOLOGY L423
Political Sociology

Prerequisites: Sociology L201 or the equivalent plus University III standing. Socio-economic and cultural determinants of political power and political behaviour in Canada will be analyzed. Of special interest will be those situations and epochs in which political behaviour and the institutions of political power are radically modified. An analysis of the new parties and extra-electoral protest movements which influence behaviour and power will be important themes. (3 credits)

SOCIOLOGY L450
Honours Seminar and Essay

Prerequisites: Sociology L201 or the equivalent plus University III standing. A departmental seminar during the first term which will include discussion of methodological and theoretical concerns related to the formulation of the Honours proposals and presentation by students on topics related to their essay. Second term will involve completion of independent research and submission of the Honours Essay. Required of all Third Year Honours students. (6 credits)

SOCIOLOGY L458
Introduction to Social Work

Prerequisites: Sociology L201 or the equivalent plus University III standing. This course attempts to provide the student who is giving consideration to Social Work as a career an opportunity to finalize a decision by examining the nature and scope of this profession, its history and methods; and the basic elements of the casework process; namely, the study, diagnosis and treatment procedures. Also examined will be the role of community resources in the casework approach. (6 credits)

SOCIOLOGY L460
Topical Seminar in Sociology

Prerequisites: Sociology L201 or the equivalent plus University III standing. Restricted to Sociology Majors and Honours. Seminar course focusing on special sociological topics or areas as designated by those instructors offering such seminars in a given year. For further information consult the Department Curriculum Addendum published in spring. (3 credits)

SOCIOLOGY L462
Topical Seminar in Capitalism and Underdevelopment in Africa and Latin America

Prerequisites: Sociology L201 or the equivalent plus University III standing. This course is an application of the theories of economic development to the African and Latin American experience with multi-national corporation domination of their economies. It raises the question of whether self-reliance (in the sense of Nyerere's "IJAMAA") is a more viable alternative to development for Africa and Latin America, rather than the creation of a local petty bourgeoisie of entrepreneurs. (6 credits)

51.26 Department of Theological Studies

Associate Professor and Chairman
S. McEVENUE

Associate Professors
W. BEDARD, O.F.M.
REV. R. W. BREEN
M. FAHEY, S.J.
P. GARNET
J. HOFBECK
G. O'BRIEN, S.J.
M. SPICER
S. WESOLOWSKY

Assistant Professor
P. R. MOROZIUK

51.26.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 51.1

The superscript indicates credit value.

60 BA Honours in Theological Studies

Year I
18 Theo Elective credits
Year II
24 Theo Elective credits
Year III
18 Theo Elective credits

NOTE: Each student must have his programme approved by the Department. The following directives should normally be observed:

1) *6 credits (1 full course) should be chosen in each of the theological areas: Old Testament, New Testament, Systematic, Historical.*
2) *6 credits (1 full course) should be chosen in a non-Christian tradition.*
3) *A maximum of 18 credits (3 full courses) may be chosen among the 200-level courses.*
4) *6 credits (1 full course) may be taken as a cognate course, offered in another department.*
5) *A group of 18 to 24 credits (3 to 4 full courses) within one area should be planned in order to assure each student of expertise in some aspect of Theology.*
6) *A reading knowledge of those languages required for advanced work must be planned.*
7) *Students seeking admission to the Honours programme on or after June 1st 1977 will be bound by the Honours requirements outlined in § 16.2.4 of this Calendar. Students who already had Honours status by June 1st 1977 will continue to be governed by the requirements which applied at the date of their admission to the Honours programme.*

42 BA Major in Theological Studies

Year I
12 Theo Elective credits
Year II
18 Theo Elective credits
Year III
12 Theo Elective credits

NOTE: Each student must have his programme approved by the Department. One course (6 credits) may be taken as a cognate course offered in another Department.

24 Minor in Theological Studies

24 Theo Elective credits

NOTE: Each student must have his programme approved by the Department. Three courses (18 credits) must be chosen among the offerings at the 300 level and 400 level. The fourth course (6 credits) may be chosen at any level.

51.26.2 DEPARTMENT OF THEOLOGICAL STUDIES

All courses in the Department with the exception of L499, are open to any qualified student of Concordia.

The various Catholic School Commissions have openings for those qualified to teach religion. Interested students should take at least a Major in Theological Studies. From an educational point of view, we advise interested students to enrol in a Double Major, *i.e.* Theology plus another subject which the student would like to teach.

Shifting governmental policies in the classification of teachers have led us to offer the following programme options: *Specialization:* with the approval of the Department, a student in a particular case may be granted a specialized degree after completion of 60 credits in Theological Studies.

Joint Honours or *Joint Specialization* programmes involving Theology and other disciplines are available.

The Department also offers a *Diploma Programme* intended primarily to meet the needs of teachers of religion. It is described in the Graduate Studies Calendar of Concordia University.

51.26.3 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.5.

COURSES OF GENERAL INTEREST

THEOLOGY L200
Selected Topics in Theology
Content will depend on the theme designated by the Department, which varies from year to year. (3 credits)

THEOLOGY L201
Selected Topics in Theology
A student may repeat Theology L200, provided that the content is different, by registering for credits under Theology L201.

THEOLOGY L202
Selected Topics in Theology
Content will depend on the theme designated by the Department, which varies from year to year. (3 credits)

THEOLOGY L203
Selected Topics in Theology
A student may repeat Theology L202, provided that the content is different, by registering for credits under Theology L203.

CONTEMPORARY RELIGIOUS PROBLEMS

THEOLOGY L204
Prayer as Seen in the Bible
The recent upsurge of religious experience from Pentecostalism to Eastern mysticism shows modern man's deep interest in prayer. The course will investigate the various Biblical understandings of prayer in order to discover its foundations and to establish what can authentically substantiate and enrich the prayer experience. (3 credits)

THEOLOGY L205
Prayer as Seen by Contemporary Theologians
It is noteworthy that contemporary theologians of various traditions see prayer as a supremely important theological subject. Some of these authors will be studied, with particular reference to the different approaches represented respectively by Hans Urs von Balthasar and Karl Rahner. (3 credits)

THEOLOGY L206
Theology of Hope
The "Death of God" movement raised many unanswered questions before its own demise. It clamored for a God that would be seen as involved with man. The challenge was met by a dynamic new start called "theology of hope" which evolved into "political" theology, theology of revolution, theology of liberation, theology of play and celebration, and currently, a theology of human and divine suffering. Representatives of these theologies will be read in selection and evaluated in the light of biblical theology. (6 credits)

THEOLOGY L210
Contemporary Atheism
The Christian of today has to face an accelerated process of secularization and new forms of atheism. This course seeks to analyse the contemporary phenomenon of "atheism", to examine its roots, to raise the question of its positive meaning, and to define a Christian attitude towards it. Through this dialogue with atheism we shall attempt to uncover the essentials of Christianity itself. (6 credits)

THEOLOGY L211
Christian Ethics
Through an analysis of the main present-day moral problems, and in confrontation with non-Christian and non-religious interpretations, we intend to elaborate the specific character of Christian ethics. Particular attention will be given to the necessary changes within any moral system. (6 credits)

THEOLOGY L213
Religious Experience in Contemporary Society
An exploration of some of the less orthodox paths taken by modern man in his search for religious meaning. Presentations will be given by those involved in this search in a variety of ways. The course will also uncover historical precedents for modern religious manifestations in the Hindu, Buddhist, Jewish and Christian cultures. The occult and its appeal. Chemically-induced religious experience and its authenticity. Hasidic Judaism. Spiritualism. The "charismatic movement" in Christianity. Eastern mysticism in the West. (6 credits)

THEOLOGY L215
The Christian Mystical Tradition
A study of mystical experience in Christianity through the ages. The study will include not only an investigation of great representatives of mystical traditions but also an exploration of how ordinary Christians search for communion with God. (6 credits)

THEOLOGY L216
Christianity and Marxism
This course will examine the basic premises by means of which Christians and Marxists believe and hope they can cope with the problem of personal and social human existence. An insight into the meaning of transcendence, theism-atheism, humanism, the future, freedom and creativity will be gained through the study of the development of the Marxist-Christian dialogue. The theology of hope will be explored as a possible answer to man's quest for meaning and purpose. (3 credits)

THEOLOGY L217
Russian Religious Humanism
This course studies Dostoevsky, Tolstoy and Berdyaev with reflections upon the following dimensions of religious experience: God, human personality, nature of human existence, necessity of faith, the question of morality without God, creativity, freedom, suffering, existential harmony and the meaning and purpose of life. The ultimate purpose of this course as of Theology L218 is the examination of the anthropological world-view in its quest for self-understanding in order to open up avenues

leading to the discovery ar 1 experience of God. (3 credits)

THEOLOGY L218
Soviet Humanism and Religion
This course will explore the spiritual and human existential agony manifested in contemporary Soviet writers: Zamyatin, Dudintsev, Bulgakov, Pasternak and Solzhenitsyn. This exploration will serve as an insight into the possibility of whether humanity can or cannot exist without religious experience in the context of a socio-political negation of God. (3 credits)

THEOLOGY L219
Theology and Development
A study of the role that Christianity has played and has still to play in the development of the third world. The focus of this course will be one of the developing areas, e.g., Latin America, Africa, Asia, depending on the interests and needs of the students. (6 credits)

THEOLOGY L221
(Also listed as Interdisciplinary Studies L221)
Women in Christianity
A study of the theological and historical roles of women in Christianity. The course will examine female proto-types and images of women in the Old and New Testaments, Fathers of the Church, canon law, mediaeval theology, the Reformation and modern theology. It will also treat the roles of prominent women in the history of Christianity. (3 credits)

THEOLOGY L224
Alternate Modes of Christian Commitment
A study in alternate modes of Christian living distinguished by a rigorous communal adherence to the evangelical counsels of poverty, chastity and obedience. Christian history speaks of these adherents as cenobites, monks, nuns, friars or clerks regular. The variety of this Christian experience and its influence on the development of society will be the two main focal points. (6 credits)

THEOLOGY L225
Marriage
A study of the phenomena that express man's need for love and union. Marriage has traditionally been the most common symbol of this love and union answering a psychological, social and religious need. Questions are being asked concerning the necessity and permanence of marriage as a civil or religious institution. (6 credits)

THEOLOGY L231
Twentieth Century Consciousness of God
A study of representative intellectuals of various religious denominations and in differing academic disciplines in relation to their challenges to traditional ongoing theological discourse. The pathos of the intellectual will be contrasted with the understanding faith of the theologian. The open-endedness of the Catholic faith will be discussed. (3 credits)

THEOLOGY L232
Nineteenth Century Criticism of Christianity
The course entails: a) an introductory consideration of the Enlightenment and, in particular, of Lessing as theologian; b) theological perspectives of Schleiermacher and Hegel; c) the theological reductions and cirticisms of Strauss, Feuerback, Marx, Kierkegaard and Nietzsche. (3 credits)

THEOLOGY L237
The Problem of Evil
An exploratory course that will treat, from a theological and philosophical perspective, the problem of evil both historically and thematically: historically by considering occurrences of various modes of speaking about evil; thematically, by considering the methodological issue involved in the legitimacy, relevance, and dynamics of such an enquiry. (6 credits)

INTERDISCIPLINARY EXPLORATIONS

THEOLOGY L240
Theology and the Arts I: The Mythic Image
An examination of the classical media and art forms in music and painting, exploring the mythic and poetic foundations of theological discourse and its relation to the imagination of the artist. (3 credits)

THEOLOGY L241
Theology and the Arts II: The Open-Eye
An exploration of the most recent media, art forms and underground films in order to see the "god metaphors" and, with a theological reflection, to become aware of the new allegory and the civilizing function of the God of the Imagination. (3 credits)

THEOLOGY L255
Ultimate Concern in North American Literature
Existential questions (the absurd, alienation, utopia, etc.) will be explored in a theological perspective, through the study of representative works of drama and fiction. (6 credits)

THEOLOGY L261
Theology and Politics
A study of the historical reciprocity between political structures and the theological expression of man's social and political existence. (6 credits)

THEOLOGY L264
Theological Dimensions of Psychology I
The course is a theological exploration in psychological studies embracing: a) a critical and constructive consideration of Freud and Jung; b) a survey of neo-Freudian social psychologist, such as Horney and Sullivan; c) a survey of third force psychologists such as Rogers, Maslow and May. (3 credits)

THEOLOGY L265
Theological Dimensions of Psychology II
This course consists of exploratory studies on main themes and fields of concern related to psychology and theology such as faith, anxiety, psychic projections, devil-beast, adulthood, and informed consciousness and transformation. Audio-visual methods and seminar sessions will be used. Individual projects and research on a tutorial basis will be encouraged. (3 credits)

THEOLOGY L270
Science and Religion
A study of representative classic and contemporary formulations of the nature of scientific and religious truth. This course will examine both the types and the bases of various claims made in the areas of science and religion. (6 credits)

RELIGIOUS DIVERSITY

THEOLOGY L277
Primitive Religions
A consideration of the basic religious attitudes and postures of primitive man and of the

role of religion in his life. An attempt will be made to assess the contribution of the religion of primitive man to Christian theology. (6 credits)

THEOLOGY L279
Eastern Religions (Reading Course)
Introduction to the classical works of major Eastern Religions. (6 credits)

THEOLOGY L280
World Religions I: Islam
This course intends to acquaint the student with the different stages of the Muslim Tradition and the characteristic features of the Islamic world-view. It combines a survey of Islam with an interpretation of the specific practices and articulations of the Muslim faith. Main areas discussed: Qur'an (Coran), Muhammad (The Prophet), Hadith (Prophetic Tradition), Shari'ah (Religious Law of Islam), Kalam (Muslim Theology), Sufism (Muslim Mysticism), Shi'ism (Islamic Heterodoxy), and Modern Socio-Religious Developments. (3 credits)

THEOLOGY L281
World Religions II: Buddhism
This course intends to initiate the student into Buddhism as a world-view and Way of Life. A survey of its religio-historical and religio-geographical development will be combined with readings in Buddhist texts. The course follows the traditional Buddhist Triratna structure, including: The Life of the Buddha, the Dharma (Buddhist Doctrine and Principles), and the Sangha (the Buddhist Community and its Schools). (3 credits)

THEOLOGY L285
Ancient Near Eastern Religions
The religions of ancient Mesopotamia, Egypt and the Levant during the Bronze and early Iron ages. This material provides our best documented examples of the religions of early civilized man and constitutes invaluable background material for the study of the religion of the Old Testament. (6 credits)

THEOLOGY L287
Contemporary North American Judaism
Its historical, philosophical and theological developments with special consideration given to twentieth-century patterns and problems. (6 credits)

THEOLOGY L293
Introduction to Orthodox Christianity
This course will explore the religious thought and religious experience of the segment of the Christian community known as Orthodox. This exploration will be conducted through the media of history, culture, and mystical theology. The historical, cultural and ethnic diversity of the Orthodox community and its status, problems, and future in the North American society will also be examined. Another perspective on Orthodox Christianity will be yielded through the study of its interrelationship with Catholicism and Protestantism and the resulting theological, spiritual and ecumenical influences, mutually exerted. Thus the student can become aware of the forces shaping 20th-century Christianity. (6 credits)

THEOLOGY L298
Catholicism from Trent to the French Revolution
The religious experience of Catholicism after the Prostestant reform. The areas of concern will deal with the Council of Trent, the Spanish mystical reform, "L'Ecole Française", the Jesuits and Jansenism. (3 credits)

THEOLOGY L299
Catholicism from the French Revolution to the Present
A search for the roots of the Catholic mentality in 19th and 20th century sources. The course will deal with Ultramontanism, Modernism, Papal social doctrine and the "aggiornamento" of John XXIII. (3 credits)

INTRODUCTORY COURSES

THEOLOGY L300
Introduction to the Old Testament
An introduction to the Old Testament experience of man with God in its various expressions (in the historical, prophetic, and wisdom literature). Emphasis will be given to the methods of Old Testament interpretation in its permanent significance for Christian thought. (6 credits)

THEOLOGY L301
Introduction to the Pentateuch
A reading of the ancient texts using current methods of interpretation. (3 credits)

THEOLOGY L302
Introduction to the Historical, Prophetic and Wisdom Books of the Old Testament
A reading of the ancient texts using current methods of interpretation. (3 credits)

THEOLOGY L310
Introduction to the New Testament
This course is designed to introduce the student to the methodology and the tools of New Testament interpretation as a whole. Particular emphasis will be given to the literary, historical, and doctrinal analysis of the Gospel of Mark. (6 credits)

THEOLOGY L311
Introduction to Jesus and the Gospels
The date, authorship, purpose, structure and sources of the canonical gospels. The work and words of Jesus in their historical setting. (3 credits)

THEOLOGY L312
Introduction to the Early Church
The date, authorship, purpose, structure and sources of the Acts, the Epistles, and the Revelation. The birth, growth, life and teaching of the first-century Church in its historical context. (3 credits)

THEOLOGY L330
Introduction to Systematic Theology
After an introduction to the realm, methods, tools, and sources of theology, the course intends to elaborate the overall dynamic structure of the dialogical existence of man with God, which is the horizon in which man and world obtain an intelligent and positive meaning. (6 credits)

THEOLOGY L350
Introduction to History of Christianity
An introduction to the historical dimension of Christian existence, of its structure, methods, major driving ideas and personalities within the different epochs. (6 credits)

THEOLOGY L351
Introduction to Ancient and Medieval Christianity
A reading of ancient and medieval texts in their cultural context with attention to pertinent

social, economic, political and theological developments in each period. (3 credits)

THEOLOGY L352
Introduction to Reformation and Modern Christianity
A reading of reformation and modern texts in their cultural context with attention to pertinent social, economic, political and theological developments in each period. (3 credits)

THEOLOGY L370
Methods in the Study of Religion
This course will examine some of the main approaches to the study of religion, giving emphasis to the key problems and techniques of inquiry in these approaches, with special attention to the theological method in its distinctive Christian context. (6 credits)

THEOLOGY L372
Religious Language
A study of religious *and* theological language in relation to scientific, philosophical and symbolic forms of human self-expression. This course will examine different forms of creativity in religious language and of critical interpretation in theological language. (6 credits)

ADVANCED COURSES

Prerequisite: Successful completion of a corresponding 300 level course or its equivalent.

THEOLOGY L400
Advanced Topics in Theology
This course focuses on advanced topics of interest in Theology. Content will depend on the theme designated by the Department, which varies from year to year. (3 credits)

THEOLOGY L401
Advanced Topics in Theology
A student may repeat L400, provided that the content is different, by registering for credits under Theology L401. (3 credits)

THEOLOGY L402
Advanced Topics in Theology
This course focuses on advanced topics of interest in Theology. Content will depend on the theme designated by the Department, which varies from year to year. (3 credits)

THEOLOGY L403
Advanced Topics in Theology
A student may repeat Theology L402, provided that the content is different, by registering for credits under Theology L403. (3 credits)

SCRIPTURE

THEOLOGY L405
The Pentateuch
In the light of the present state of research, the oral and written traditions of the Pentateuch will be explored with a particular emphasis on the different kerygmatic and theological interests. (3 credits)

THEOLOGY L406
The Historical Books
In the light of the present state of research, the oral and written traditions of the Historical Books will be explored with a particular emphasis on the different kerygmatic and theological interests. (3 credits)

THEOLOGY L407
The Prophetic Traditions
An introductory theological survey of the prophetic traditions in Israel's history: the origin, character and motive of this activity. Special attention will be given to the fundamental and unique role played by the individual prophets, through an arrangement of themes and structures. Special attention will be given to selected texts. (3 credits)

THEOLOGY L408
The Psalms and Wisdom Literature
An introductory theological survey focusing on: 1) the Psalms: their conception and creation as man's prayer, a link in the history of God's revelations; and 2) the Wisdom movement: its development and its bearing on biblical theology. Special attention will be given to selected texts. (3 credits)

THEOLOGY L411
The Synoptic Gospels
An introduction to the study of the gospels as sources for the life and teaching of Jesus. It will cover the history of the synoptic problem, critical approaches, and the results of investigations into the synoptic gospels for an understanding of Jesus of Nazareth. Particular attention will be given to the Gospel of Luke. (3 credits)

THEOLOGY L412
Acts and the Beginning of Christianity
Continuation of L411 (though it may be taken separately by permission of the Professor) concentrating upon the historiography of Luke and his description of the rise of Christianity as a separate group within Judaism. Attention will be paid to Luke's use of sources in the formulation of his theology, especially with respect to his Christology and Ecclesiology. (3 credits)

THEOLOGY L414
The Johannine Writings
An extended examination of Gospel, Letters and Revelation situated within the context of first-century Christian and non-Christian religious thought. (6 credits)

THEOLOGY L416
The Theology of St. Paul
A historical-critical examination of Paul's theological thought, tracing its development through the chronological sequence of his letters. The focus is on what is central and normative for Christian theology, and what is particularly relevant for today. (6 credits)

THEOLOGY L418
New Testament Christologies
Seminar dealing critically and historically with key sections of the New Testament relating to the person of Jesus of Nazareth. Their background, sources, and Christological relevance will be examined. (6 credits)

SYSTEMATIC THEOLOGY

THEOLOGY L431
Theology of Revelation
This course will offer an inquiry into the concept of revelation as a central concept of fundamental theology and will deal with the questions of the possibility, knowability, and mystery of revelation. It will consider the contributions of representative theologians, both Catholic and Protestant, to the development of the theology of revelation. (6 credits)

THEOLOGY L432
Theological Anthropology
This course will analyse the different interpretations and emphases given to the doctrine of man's existence in the image of God from a Christological and theological viewpoint. More recent insights in this field will be examined and an attempt will be made to outline the basic elements of a contemporary anthropology from a systematic theological perspective. (6 credits)

THEOLOGY L438
Problems of Eschatology
The seminar will investigate the relationship between history and eschatology, the problem of death, resurrection, millennium, etc., in order to update theology so as to be a challenge to the modern mind. (6 credits)

THEOLOGY L440
Theology of the Church
A study in the development of the self-understanding of the Church. (6 credits)

THEOLOGY L442
Christology
This course is an inquiry into the mystery of the Incarnation. After a short survey of the biblical foundations and of the definitive establishment of the traditional Christological doctrine, more recent insights about the God-man Jesus-Christ will be proposed and critically evaluated. (3 credits)

THEOLOGY L443
Theology of Redemption
This course will develop a contemporary understanding of the doctrine based on Christian revelation as it has been crystalized in the Bible and explained by historically unfolding doctrines of the Church. Three questions will be emphasized: From what have the world and man been redeemed? What is the outcome of redemption on the world and man? By whom and how is redemption performed? (3 credits)

THEOLOGY L444
The Trinity I—Historical Presentation
The traditional doctrine of the Trinity as developed in Scriptures, the Church Fathers, and Councils of the Church. (3 credits)

THEOLOGY L445
The Trinity II—Systematic Interpretation
An examination of current discussions of the Trinity in theological inquiry. (3 credits)

THEOLOGY L451
Recent Developments in Moral Theology
This course will focus on the Protestant and Catholic theologians who have in the recent past developed changes in the approaches to moral theology and to particular moral problems. (3 credits)

THEOLOGY L452
Contemporary Moral Problems
A continuation of Theology L451 with particular emphasis on specific themes. (3 credits)

HISTORY OF CHRISTIANITY

THEOLOGY L461
Post-Apostolic Christianity (98-180 A.D.)
(3 credits)

THEOLOGY L462
Christian Communities in the Third Century
(3 credits)

THEOLOGY L463
Religion and Society in the Early Middle Ages
A study of theology and religion in the Europe of the 12th and 13th centuries, using the manifestations of popular piety as an introduction to the various developments of the period. (3 credits)

THEOLOGY L464
Religion and Society in the Later Middle Ages
A study of Christianity in the 14th and 15th centuries. The rise of reform movements from within the Church will be studied as a means of understanding the theological and social situation of the period. (3 credits)

THEOLOGY L465
The Catholic and Protestant Reformations of the XVI Century
An historical and theological analysis of the events, personalities and ideas emerging from the religious upheaval of the XVIth century. Emphasis will be placed on the parallel restructuring, re-thinking and renewal that existed in both Catholic and Protestant communities. (6 credits)

THEOLOGY L466
Protestant Origins and Their Distinctive Development
This course traces the characteristic doctrines and movement of Protestantism through the essential phases of their evolution. (6 credits)

THEOLOGY L467
History of Christianity: 20th Century
This course will discuss issues of contemporary Christianity; modernism, theological revival, ecumenism, the contribution of the Second Vatican Council. (6 credits)

THEOLOGY L468
Canadian Church History: Pre-confederation
A survey of the persons, institutions, and religious thought that formed the mentality of the Christian Churches prior to Confederation. (3 credits)

THEOLOGY L469
Canadian Church History: Post-confederation
A survey of the persons, institutions, and religious thought that formed the variety of mentalities in Canadian Christianity. (3 credits)

THEOLOGY L499
Honours and Majors Theology Tutorial
Open to Honours and Major Theology students. At the end of the second year, students choose, in consultation with a tutorial director, a research topic or other specialized work for an intense analysis during the final year. (6 credits)

The following courses are university level courses which were offered in the year indicated but did not appear in the official Calendar.

THEOLOGICAL STUDIES
1976
THEOLOGY 300B
Theologies of Liberation and Political Theology
(3 credits)

THEOLOGY 400B
Introduction to the Historical Prophetic and Wisdom Books of the Old Testament
(3 credits)

THEOLOGY 410B
Introduction to the Early Church
(3 credits)

THEOLOGY 450B
Introduction to Reformation and Modern Christianity
(3 credits)

THEOLOGY 505Z
Theologies of the Old Testament
(6 credits)

THEOLOGY 553Z
Ethical Problems of Life and Death
(6 credits)

61 Faculty of Commerce and Administration

Table of Contents

61.1 COMMERCE & ADMINISTRATION

61.2 ADMISSION REQUIREMENTS

61.2.1 Bachelor Degree
61.2.2 Core Requirements
61.2.3 Bachelor of Commerce Programme
61.2.4 Bachelor of Administration Programme

61.3 GENERAL INFORMATION

61.4 ACCOUNTANCY

61.5 ADMINISTRATION

61.6 FINANCE

61.7 MANAGEMENT

61.8 MARKETING

61.9 QUANTITATIVE METHODS

61.10 ECONOMICS

61.11 COMPUTER SCIENCE

61.12 ADDITIONAL COURSES FOR COMMERCE STUDENTS

61.13 SPECIAL PROGRAMMES IN ACCOUNTANCY

61.14 SPECIAL CERTIFICATES

61.15 COMMERCE & ADMINISTRATION CONSULTATIVE COMMITTEE

61.1 Commerce & Administration

Dean
ANDREW BERCZI

Assistant Dean—Administrative Affairs
HENRY S. TUTSCH

Assistant Dean—Student Affairs
ROLAND O. WILLS

Assistant Dean—Loyola Campus
BRUCE ENGLISH

Members of the Commerce & Administration Consultative Committee are listed in § 61.15

61.2 Admission Requirements

General admission requirements are listed in § 13

Specific requirements for admission to the Faculty of Commerce & Administration for students in CEGEP are two semester courses in mathematics—College Algebra and Introduction to Calculus. Arrangements will be made in the first-year programme to give special instruction to those students who lack adequate mathematical preparation.

61.2.1 BACHELOR DEGREE PROGRAMMES

The faculty of Commerce and Administration offers two distinct Bachelor programmes. The *Bachelor of Commerce (BComm)* degree is the more structured "professional" type programme in which the student will select a Major from those offered in Commerce or Economics. The *Bachelor of Administration (BAdmin)* degree is a less structured "liberal" type programme which permits the student to pursue interests within or outside the Faculty and offers the possibility of complementing a fundamental grounding in Administration with minor concentrations in an area of interest. Degree requirements listed below apply to all students entering the programme on or after June 1, 1976.

61.2.2 CORE REQUIREMENTS

The required 51-credit core is identical for both programmes and comprises the following courses:

1st Year	Accountancy	C213
	Quantitative Methods	C243
	Economics	(L210) S210
	Management	C266
	Marketing	C213
	Accountancy	C218
	Quantitative Methods	C244
	Economics	(L209) S209
	Management	C213
	Finance	C314
2nd Year	Management	C475
	Quantitative Methods	C313
	Marketing	C350
	Management	C340
	Quantitative Methods	C314
	Finance	C315
3rd Year	Management	C460

NOTE: The student is responsible for following the correct sequence of courses required for the completion of a particular programme.

61.2.3 BACHELOR OF COMMERCE PROGRAMME

This programme provides the student with an education for business life. It is our intention to graduate students liberally educated about business. To accomplish this, we have designed a multi-disciplinary and interdisciplinary curriculum which is intellectually challenging.

The first year of the programme is intended to provide an informative accumulation of operational attitudes, skills and tools which form the base for the core concentration.

The core concentration in the second year attempts to give broad experience in all phases of business in a coordinated, analytical and reflective period of study. All the resources of the student's intellectual ability are combined with his interdisciplinary studies to analyze, formulate, judge, and solve challenging business situations.

The last year of the programme is intended to provide the student with an opportunity to immerse himself in an area of specialized study. In addition, the student participates in a course which is designed to test his ability to integrate his knowledge and to view the study of business as a whole.

In view of this design, all students must follow the sequence of the courses on the basis of an academic year as outlined in the curriculum. No student will be permitted to register for second or third year courses without having completed the courses of the first academic year.

Exceptions may be authorized in writing for valid reasons by the Dean or the Assistant Dean — Student Affairs.

Degree Requirements

To obtain the degree of Bachelor of Commerce, all students are required to follow a Major Programme. A Major consists of at least 24 credits in the chosen discipline in addition to the required 51-credit core. The remaining credits may be selected to form a Minor programme if applicable. Major and Minor programmes are available in the following areas:

CONCORDIA FACULTY OF COMMERCE AND ADMINISTRATION

***Bachelor of Commerce**	**Honours**	**Major**	**Minor**
Accountancy		X	X
Economics	X	X	
Finance		X	X
Management			
Administrative Management		X	X
Human Resource Management		X	
Personnel Management			X
Entrepreneurship & Small Business Management			X
Managerial Law			X
Marketing		X	X
Quantitative Methods		X	X
Business Statistics			X
Management Operations Research			X
Business Systems			X

Students of this Faculty who elect to major in any of the disciplines of the Faculty or Economics will be enrolled in a Bachelor of Commerce degree programme.

***Bachelor of Administration**	**Specialization**	**Minor**
General Administration (60 credits)	X	
30 credits may be elected from any of the offerings of the University but at least 15 credits must be beyond the introductory level		X

Students will indicate their preferred field of concentration, either Major or Honours, at the time of application for entry. It should be noted, however, that since the programme of study of the first year is common to all programmes, students may change to another programme, provided, of course, that the capacity of the programme permits it.

**Both degrees have a common core of 51 credits out of a total of 90 credits.*

61.2.4 BACHELOR OF ADMINISTRATION PROGRAMME

The Bachelor of Administration Programme is designed to develop problem-solvers and decision-makers in all walks of life.

A successful graduate is able to develop objectives and strategies, organize people and resources, direct an organization's activities and control these activities, and appraise objectives and strategies in the light of results.

The programme has been made flexible enough to allow a student to develop according to his own needs.

This programme provides the student with a fundamental grounding in administration and offers the opportunity to pursue varied interests among courses offered by the University.

Degree Requirements

To obtain the degree of Bachelor of Administration, students are required to complete the 51-credit core and 9 elected credits from Commerce and/or Economics to complete the 60 credits required for specialization. The remaining 30 credits may be selected from any of the offerings of the University but at least half of these must be beyond the introductory level.

61.3 General Information

Old Credit Programme (Transition)

Students who have enrolled in a programme at this Faculty prior to June 1, 1976 will complete the programme as shown in the University Announcement 1975/76. For substitution of courses not offered in the new programme, students will consult with representatives of the respective departments.

Failures

Students are cautioned that a failure in a first term course will prohibit them from proceeding to a second term course for which the first is a prerequisite. Students who find themselves in this position have two alternatives available:

1. They may drop the second term course and register in a section of the failed course, if available.

2. They may drop the second term course and apply to write the supplemental examination (in March for potential graduates and in July for others) if they are eligible to do so. In this case, students may register in another course for which they have the necessary prerequisite.

There will be a course change period at the beginning of the second term at which time students falling in the above categories must make arrangements with the Office of the Registrar for the necessary course changes.

French Language

The business community, as well as governments, now express a preference for university graduates who are bilingual. We, therefore, advise all students to take advantage of the opportunities available during their years at this University to ensure that they are bilingual when they present themselves for employment upon graduation.

Courses/Non Commerce Students

Students not registered in the Faculty of Commerce & Administration, who wish to undertake any courses offered by the faculty, but do not have the stated prerequisites, must obtain permission in writing from the chairman of the department concerned, *prior to registration.*

61.4 Accountancy

Professor and Chairman of the Department
H. MANN

Professors
L. BESSNER
A. DICKIE
J. G. FINNIE

Associate Professors
G. R. CURNEW
H. DAUDERIS
F. P. DOUGHERTY
D. F. MacDONALD
E. B. MARKLAND
H. B. RIPSTEIN
N. VAN ZANTE

Assistant Professors
K. ARTHUR
H. CHAN
M. GOLD
T. KAY
W. E. PIETZSCH

Lecturers
P. DECELLES
J. FISHER
C. H. LIEBMAN
G. LOWENFELD

Special Lecturers
H. S. GREENSPON
G. KOURI
H. ZIMMER
F. ZWIRZ

61.4.1 PROGRAMMES

33 Major in Accountancy

3 Acc C323
3 Acc C325
3 Acc C326
3 Acc C403
3 Acc C414
3 Acc C429
3 Acc C441
3 Acc C461
9 additional credits offered by the Department.

12 Minor in Accountancy

3 Acc C323
3 Acc C326
6 additional credits offered by the Department.

61.4.2 COURSE DESCRIPTIONS

ACCOUNTANCY C213
Financial I

This course examines the theory and practice involved in recording and reporting an organization's financial information for interested parties. It includes the preparation and analysis of financial statements. This course is required for all Commerce and Administration students and is recommended for non-Commerce and Administration students, particularly those considering graduate studies in business administration. (3 credits) *NOTE A/See § 200.2*

ACCOUNTANCY C217
Financial and Managerial

Prerequisite: Accountancy C213. This course is designed to develop, through verbal analysis of business cases, an understanding and skill in the preparation of statements for financial accounting purposes taking into account the needs of business management. The student must be able to analyze these statements and comment critically thereon. (3 credits) *Major and Honours students in Accountancy may not take this course for credits. NOTE A/See § 200.2*

ACCOUNTANCY C218
Managerial I

Prerequisite: Accountancy C213. This course is an introduction to the development of accounting information for purposes of control, decision making and the more efficient operation of the enterprise. (3 credits) *NOTE A/See § 200.2*

ACCOUNTING C220
An Accounting Approach to Management

This course is designed to cover certain major aspects of management related to the accounting process. These include: business organization; accounting concepts; financial statement analysis; management uses of accounting information; and, the effect of taxation on business decisions. (3 credits). *NOTE A/See § 200.2; Commerce and Administration students may not take this course for credits.*

ACCOUNTANCY C221
Accounting and Management

Prerequisite: Accountancy C220. This course is sequential to Accountancy C220, and examines in greater depth the areas covered in that course. (3 credits). *NOTE A/See § 200.2; Commerce and Administration students may not take this course for credits.*

ACCOUNTANCY C323
Intermediate I

Prerequisite: Accountancy C213. This course extends, at a senior level, the material covered in earlier courses, integrating the previous work with advanced theory and application. Intensive study is made of the theory and practice of external reporting by commercial and other entities. Concepts and procedures involved in the valuation of resources are studied, as are the concepts of income determination. (3 credits) *NOTE A/See § 200.2*

ACCOUNTANCY C325
Advanced

Prerequisite: Accountancy C326. This advanced course is primarily concerned with corporate combinations. A study is made of other advanced accounting areas. (3 credits) *NOTE A/See § 200.2*

ACCOUNTANCY C326
Intermediate II

Prerequisite: Accountancy C323. This course continues the intensive study of Intermediate 1 with particular emphasis on obligations, funds valuation statements and financial statement analysis. (3 credits)

ACCOUNTANCY C403
Cost and Management Accounting

Prerequisite: Accountancy C323. This course, based primarily on lectures and problem-solving is directed to needs of students who contemplate careers in professional accounting as members of recognized accounting bodies. A detailed examination is made of the various techniques, systems and procedures applicable to the managerial use of accounting information for decision-making, profit-planning and control. (3 credits) *NOTE A/See § 200.2*

ACCOUNTANCY C407
Accounting Practice and Policy

Prerequisite: Accountancy C323. Corequisite: Accountancy C326, C410 and Accountancy C429, C432. If any of the related courses have not been taken previously, they must be taken simultaneously. This course, based almost exclusively on the case method of instruction, is of particular relevance to students who contemplate professional accounting careers as members of recognized accounting bodies. Areas previously or concurrently covered in the field of corporate financial reporting are extended, and current accounting literature and current pronouncements of professional accounting bodies are examined. Course objectives include further development of theoretical concepts through which appropriate solutions to practical problems may be derived, and the development of accounting policies to meet given and general situations. (3 credits). *NOTE A/See § 200.2*

ACCOUNTANCY C410
Specialized

Prerequisite: Accountancy C325. In this course an examination is made of specialized aspects of financial accounting. Some of the areas to be covered are government accounting, fund accounting and unusual aspects of statement preparation for entities such as banks and insurance companies. (3 credits)

ACCOUNTANCY C414
Information Systems and Control

Prerequisite: Accountancy C213. This course includes information systems theory, control theory and practice, responsibility accounting, and a survey of selected management science techniques. Through case analysis and discussions the interrelationships between information and control systems, managerial style and human behaviour are established. (3 credits) *NOTE A/See § 200.2*

ACCOUNTANCY C422
Cost Accounting (Advanced)

Prerequisite: Accountancy C403. This course continues at an advanced level the study of modern cost accounting systems; and emphasizes the contemporary problems facing cost accountants, and their potential solutions by the use of sophisticated techniques. (3 credits) *NOTE A/See § 200.2*

ACCOUNTANCY C429
Analytical Auditing

Prerequisite: Accountancy C326. This course introduces auditing theory and its application by external and internal auditors in fulfilling their respective objectives and responsibilities. The focus is on the audit of transactions or procedures used by organizations. An analytical approach is used to discuss different accounting systems and to evaluate systems of internal control. The development and use of detailed audit procedures and audit programs is also covered. Cases and problem solving form the basis of student involvement in this course. (3 credits) *NOTE A/See § 200.2*

ACCOUNTANCY C432
Financial Auditing

Prerequisite: Accountancy C429. This course emphasizes the role of the public accountant in expressing an opinion on the financial statements of an organization. The use of audit standards, procedures and internal control is related to the expression of an auditor's opinion. Cases and problem solving form the basis of student involvement in this course. (3 credits) *NOTE A/See § 200.2*

ACCOUNTANCY C433
Auditing and Investigation

Prerequisite: Accountancy C429. This course deals with questions related to professional accounting practices and also covers different types of management services that auditors are frequently requested to undertake. (3 credits) *NOTE A/See § 200.2*

ACCOUNTANCY C441
Taxation I

Prerequisite: Accountancy C213. This course examines the Canadian taxation structure. Emphasis is given to the income taxes levied on individuals, and includes the taxation of capital gains, employment, business and investment income. (3 credits) *NOTE A/See § 200.2*

ACCOUNTANCY C442
Taxation II

Prerequisite: Accountancy C441. This course extends the coverage of Accountancy C441 with a detailed examination of taxes on corporate incomes, and of corporate distributions. Sales taxes, succession duties and other tax areas are also examined. (3 credits) *NOTE A/See § 200.2*

ACCOUNTANCY C451
Computer Auditing

Prerequisite: Computer Science C211 or equivalent, and Accountancy C429. This course explores the impact of large scale computer use on the auditor and his examination of a company's records and systems of internal control. The emphasis is on helping the auditor understand when a computer can be used to assist him and how to follow through with its use. Topics covered include the different controls and techniques required in a computer system, the audit trail, approaches to computer auditing and computer application for auditing, computer and software security, and consideration of the various computerized audit packages available. (3 credits) *NOTE A/See § 200.2*

ACCOUNTANCY C461
Accounting Theory I

Prerequisite: Accountancy C325. This course examines the framework underlying current accounting thinking and procedures, and a study is made of the development and the influence of professional accounting organizations and regulatory bodies on accounting theory. Controversial areas are emphasized. (3 credits) *NOTE A/See § 200.2*

ACCOUNTANCY C462
Accounting Theory II

Prerequisite: Accountancy C461. This course extends the coverage of Accountancy C461. Particular emphasis is placed on developments in the current literature and in problem areas facing the accounting profession. (3 credits)

ACCOUNTANCY C470
Special Topics in Accounting

Prerequisite: Departmental approval. Intended to complement and supplement accounting courses taken previously or currently at the senior level, this course emphasizes accounting literature and modern thought. Students are encouraged to work independently on research topics of interest to them. Enrolment is restricted and is subject to departmental approval. (3 credits) *NOTE A/See § 200.2*

ACCOUNTANCY C471
Accounting Seminar

Prerequisite: Accountancy C470. This course examines in greater depth areas of individual interest. Enrolment is restricted and is subject to departmental approval. (3 credits) Students repeating Accountancy C471 register for credits under Accountancy C472. *NOTE A/See § 200.2*

61.5 Administration

ADMINISTRATION C201
Introduction to Administration

This course is designed to develop a basic understanding of the role of administration in our society (the efficient organization and employment of people in the techno-structure). (3 credits)
NOTE: Commerce and Administration students may not take this course for credits.

ADMINISTRATION C202
Perspective on Business

This course is designed to review the historical development of business (in Canada in particular) and to examine the relationships between the firm (management) and the owners, the employees, the customers, the government and the community. Further, it studies some of the problems facing Canadian business today: the dehumanizing aspect, pollution problems, large vs. small firms, foreign ownership, competition, etc. (3 credits)
NOTE: Commerce and Administration students may not take this course for credits.

ADMINISTRATION C350
Transportation

This course will deal with economic principles underlying the various modes of transport: i.e. rail, water, motor, air and pipeline. Current problems of each will be discussed. In addition, a survey of the principles of business logistics will be covered. Cases will be utilized when possible. (3 credits) *NOTE A/See § 200.2*

61.6 Finance

Professor and Chairman of the Department
C. C. POTTER

Associate Professors
L. BOYLE
B. ENGLISH
A. ILANO
M. LIVINGSTON

Assistant Professors
T. BARNES
E. DOUGLAS
J. FLYNN
Y. GEYIKDAGI
L. KRYZANOWSKI
R. MCKEOWN
K. PRADHAN
J. TOMASKI

Special Lecturers
E. BOUCAI
W. T. G. HACKETT
M. KATZ
S. SILVERTON

61.6.1 PROGRAMMES

24 Major in Finance

3 Fin C440
3 Fin C441
18 additional credits offered by the Department

12 Minor in Finance

3 Fin C440
3 Fin C441
6 additional credits offered by the Department

61.6.2 COURSE DESCRIPTIONS

FINANCE C314
Introduction to Finance I

Prerequisites: Economics S210 or L210 or equivalent, Accountancy C213, and Accountancy C218 previously or concurrently. A course dealing with financial standards and forecasting, the theory of interest, capital expenditure decisions, current asset management and the behaviour of money and capital markets. (3 credits) *NOTE: Students who have previously taken Finance 215 may not take this course for credit. NOTE A/See § 200.2*

FINANCE C315
Introduction to Finance II

Prerequisites: Finance C314 and Economics S209 or L209 or equivalent. A course dealing with short, intermediate and long-term financing instruments, financial structure and valuation, cost of capital and dividend policy. (3 credits) *NOTE: Students who have taken Finance 215 should consult the Department concerning permission to take this course. NOTE A/See § 200.2*

FINANCE C417
Capital Budgeting Theory

Prerequisite: Finance C315. An examination of the criteria for efficient investments and optimum financial budgeting. (3 credits) *NOTE A/See § 200.2*

FINANCE C418
Cost Benefit Analysis

Prerequisite: Finance C315. Private and public resource investment and associated problems. (3 credits) *NOTE A/See § 200.2*

FINANCE C430
Financial Management I

Prerequisite: Finance C315. A study of the role and responsibility of the senior financial officer in the achievement of current control through operational finance. A variety of case studies are used to encourage the students to develop a critical approach to the subject. (3 credits) *NOTE A/See § 200.2*

FINANCE C431
Financial Management II

Prerequisites: Finance C430. A study of the role and responsibility of the senior financial officer in the achievement of 'current control' and 'performance review' through operational finance, etc. (3 credits) *NOTE A/See § 200.2*

FINANCE C440
Finance Theory I

Prerequisite: Finance C315. This course discusses the role of research and theory in finance, and the theories of wealth allocation, interest, capital markets, and asset pricing. The discussion of these topics includes the effects of such influences as risk and inflation. (3 credits) *NOTE A/See § 200.2*

FINANCE C441
Finance Theory II

Prerequisites: Finance C440. This course will be a continuation of Finance C440 covering such topics as: dividends and the value of the corporation, cost of capital, game theory and liquidity. (3 credits) *NOTE A/See § 200.2*

FINANCE C452
Investment Analysis

Prerequisite: Finance C315. The examination of the workings of security markets and analytical techniques for the valuation of securities. (3 credits) *NOTE A/See § 200.2*

FINANCE C453
Investment Management

Prerequisite: Finance C315. A study of diversification and portfolio management techniques. (3 credits) *NOTE A/See § 200.2*

FINANCE C455
Seminar in Finance

Prerequisite: Finance C315. This course is intended primarily for Honours or Majors students and provides an opportunity for more intensive study in one or more specific topics of finance. The topic will vary according to the special interests of the professor and the students. (3 credits) Students repeating Finance C455 register for credits under Finance C456 *NOTE A/See § 200.2*

FINANCE C460
Financial Intermediaries (National)

Prerequisite: Finance C315. Principles of money and credit in their application to the operations of the central bank, chartered banks, and the financial system and markets generally. (3 credits) *NOTE A/See § 200.2*

FINANCE C461
Financial Intermediaries (Quebec)

Prerequisite: Finance C315. A study of the operation of financial institutions in the province of Quebec. (3 credits) *NOTE A/See § 200.2*

61.7 Management

Associate Professor and Chairman of the Department
R. L. CRAWFORD

Professors
G. BRINK
J. KELLY
J. SMOLA

Associate Professors
M. FRANKLIN
T. KUBICEK
P. E. PITSILADIS
G. S. RAJAN
S. P. ROBBINS
H. S. TUTSCH

Assistant Professors
V. BABA
J. P. BRUNET
D. FRANKLIN
J. GOODWIN
M. JAMAL
G. JOHNS
R. KNOOP
E. MENIPAZ
A. SANDERS

Lecturers
E. KAPLAN
R. OPPENHEIMER

Sessional Lecturer
J. B. FISHER

Special Lecturers
L. ABRAMS
R. DAINOW
M. DeBEAUPRE
P. FILIATRAULT
R. LEROUX
B. PELLETIER

61.7.1 PROGRAMMES

24 Major in Administrative Management

3 Man C345
3 Man C369
3 Man C442
3 Man C461
3 Man C462
3 Man C464
3 Man C476
3 one of Man C420, C402, C474

12 Minor in Administrative Management

3 Man C369
3 Man C442
3 Man C461
3 Man from the programme of Major in Administrative Management

12 Minor in Entrepreneurship and Small Business Management

3 Man C451
3 Man C452
3 Man C454
3 Mark C352 or C485

24 Major in Human Resource Management

3 Man C341
3 Man C342
3 Man C420
3 Man C462
3 Man C463
3 Man C464
6 two of Man C369, C441, C479

12 Minor in Personnel Management

3 Man C341
3 Man C462
3 Man C464
3 Man from programme of Major in Human Resource Management

12 Minor in Managerial Law

3 Man C476
3 Man C477
3 Man C478
3 Man C479

61.7.2 COURSE DESCRIPTIONS

MANAGEMENT C211
Business Law

A general survey of the law obtaining in the Province of Quebec with special emphasis on the aspects thereof relating to business and commerce. It includes a basic outline of the law of Domicile, Marriage, Persons, Property, Ownership and its modifications, Successions. Gifts and Wills, Testamentary Executors, Contracts, Quasi-Contracts, Offences and Quasi-Offences, Privileges, Hypothecs and Prescription, and a more detailed study of the Contract of Sale, Lease and Hire of Things and of Work, Mandate, Loan, Deposit, Partnership, Suretyship, Pledge, Insurance and an outline of the basic law applying to Negotiable Instruments. Corporations, Carriers, Bankruptcy and Winding Up, and Copyrights, Patents and Trade Marks. (6 credits) *NOTE A/See § 200.2; Commerce and Administration students may not take this course for credits.*

MANAGEMENT C213
Foundations of Behaviour

The purpose of this course is to introduce the student to those behaviorial concepts relevant to the study of organizational problems. Topics include preception, attitudes, personality, group behavior, roles and culture as they relate to organizational processes. (3 credits)
NOTE: Students will be exempted from this course if they meet either of the following requirements: (a) Two semesters of psychology, one of which must be social psychology. or, (b) Two semesters of psychology and one semester of sociology.

MANAGEMENT C266
Management: Theory & Practice

The purpose of this course is to introduce the student to management theory and practice. Management will be viewed as a discipline and as a process (planning, organizing and evaluating). The evolution and scope of management will be considered with illustrations drawn from Canadian experiences. (3 credits)

MANAGEMENT C340
Organizational Behaviour

Prerequisites: Management C213; C266. This course is designed to provide the student with an opportunity to study behaviour within formal organizations. Through theoretic and experiential approaches, the focus of instruction progressively moves through the different levels of analysis, particularly motivation, leadership and group behaviour. The objective of the course is to improve the student's perceptual, analytical and problem solving skills in the diagnosis and innovative resolution of behavioural problems in organizations. (3 credits)

MANAGEMENT C341
Organization Theory

Prerequisites: Management C266; C340. The function, structure and processes of organizations will provide the focus for study. Interrelationships among the psychosocial, technological, and formal properties of organizations will be examined. Emphasis will be placed on the diagnosis, analysis of organizational problems and optimal design alternatives for improving organizational performance and effectiveness will be explored. The objective is to provide the student with a thorough understanding of the nature of contemporary complex organizations. (3 credits)

MANAGEMENT C342
Organizational Change

Prerequisites: Management C266; C340. An administrative perspective of the behavioural and rational empirical strategies for effecting change in organizations. Emphasis will be placed on an eclectic approach to the planning and implementation of change. Models and methods of change will be reviewed and opportunities for the development of change-agent skills will be provided. (3 credits)

MANAGEMENT C345
Production Management I

Prerequisite: Quantitative Methods C314. It is the production function of the enterprise that gives us the products or services that we sell. In this course we attempt to help management guide and control this area. Topics include government programs and incentives, health and safety regulations, production incentive systems, management information systems and plant location. (3 credits)

MANAGEMENT C346
Production Management II

Prerequisite: Management C345. This course is a continuation of Production Management I and is designed to supplement the knowledge of those students choosing to minor in Production Management. One or more of the following topics will be dealt with in depth: work measurement and development of standard data for incentive systems; production planning, scheduling and control; research and development; plant layout and materials handling. (3 credits)

MANAGEMENT C368
Social Aspects of Enterprise

Prerequisite: Second year standing in any faculty. The purpose of this course is to facilitate understanding of the impact of social, economic, political and ethical environment on the process of managerial decision-making. Consideration is given to the conceptual foundations of business including the business corporation, its function and the legitimacy of its power structure. (3 credits) *NOTE A/See § 200.2*

MANAGEMENT C369
Canadian Business and its Environment

Prerequisite: Second year standing in Commerce. The purpose of this course is to examine the functioning of Canadian business and its relationships with its public, including stockholders, consumers, employees, labour, community and government. Major contemporary issues such as the impact of technology on people and the physical environment are examined. (3 credits) *NOTE A/See § 200.2*

MANAGEMENT C402
Supervisory Practice

Prerequisites: Management C266; C340. A seminar focusing on the emerging understanding of leadership and supervisory techniques in task oriented organizations. Contemporary concepts and research on leadership and supervision will be examined. The seminar will analyze the multiple bases for influence and the situational or contingency aspects of leadership. A balance among the conceptual, diagnostic, and experiential approaches to the development of supervisory capability will be emphasized. (3 credits)

MANAGEMENT C409
Principles of Insurance

This course examines the growth of insurance companies in Canada and their effect upon the economy. In addition, the basic fundamentals of insurance are covered, including such topics as life insurance, income replacement, annuities, group insurance, liability, auto, fire and theft insurance. Practical applications and use of insurance dealing with both personal and business situations will be noted. (3 credits) *NOTE A/See § 200.2*

MANAGEMENT C420
Business Research Methods

Prerequisites: Management C340 and QM C243-C244 or equivalent. This seminar focuses on the means by which social and organzational data can be gathered, analyzed, and interpreted. Needs of the firm for efficient, timely, and unobtrusive research are given special attention. Topic coverage includes applications of the scientific method, research design, field research techniques, data analysis, research utilization, and use of existing information sources. Student projects will parallel the classroom activities by designing and conducting business research studies of limited scale. (3 credits)

MANAGEMENT C441
Conflict Management

Prerequisites: Management C340; C266. An administrative approach to the study of interpersonal, intergroup and intra-organizational conflict. Utilizes lectures, case studies and interaction exercises to convey theory, empirical research and applications. (3 credits)

MANAGEMENT C442
Managerial Concepts

Prerequisites: Management C340; C266. This course provides an opportunity for intense study of recent developmental topics within the discipline. Topics might include women in management, managing in Quebec, Management By Objectives, long-range planning, equity theories of motivation, changing roles of managers. (3 credits)

MANAGEMENT C451
Managing a Small Business

Prerequisite: Accountancy C213. This introductory course emphasizes the *operational* aspects of management that are uniquely important to a small enterprise. It provides opportunity to practice operational decision-making under conditions characteristic for small firms. (3 credits)

MANAGEMENT C452
Entrepreneurship

Prerequisite: Third year standing and Departmental approval. This course will provide for the student a source of the basic techniques needed to start or purchase a business of his own. Consideration will be given to evaluation methods, the nature of an entrepreneur, legal and tax aspects and other aspects of interest to an individual starting a venture as a career alternative. (3 credits)

MANAGEMENT C454
Policy and Strategy for the Small Enterprise

Prerequisites: Third year standing and Departmental approval. This course will help the student to familiarize himself with problems of *strategy formulation* and *implementation* within the framework of starting and/or managing a small or medium-sized enterprise. All functions of management will be considered in this context and field work will be encouraged. (3 credits)

MANAGEMENT C460
Business Policy I

Prerequisites: Third year standing in Commerce. This course is designed to introduce the student to strategy formulation and implementation. Emphasis will be on integrating the learning of the programme in order to develop in students a global view of the organization. Cases will be drawn from the private, public, and non-profit sectors and consideration will be given to policy problems in both the Canadian and international contexts. (3 credits)

MANAGEMENT C461
Business Policy II

Prerequisite: Management C460. This course will concentrate on how the strategy formulated in Business Policy I will be implemented by the organization. Organization structures will be studied in differing environments. The relationships between organization structures and the organization's strategy will be analyzed. The problems encountered by general managers as well as middle managers in the process of the implementation of the set policies will be studied. (3 credits) *NOTE A/See § 200.2*

MANAGEMENT C462
Personnel Management I

Prerequisite: Management C340. The aim of this course is to provide a sound background in fundamentals, theory, principles and practice of personnel management. It will focus on the philosophies underlying current personnel policy and practices. (3 credits) *NOTE A/See § 200.2*

MANAGEMENT C463
Personnel Management II

Prerequisite: Management C462 or equivalent. The course will focus on the techniques of: recruitment, selection, training, executive development, labour relations, performance appraisal and compensation administration. (3 credits)

MANAGEMENT C464
Labour and Industrial Relations I

Prerequisite: Management C340. Labour relations is a survey course designed to provide a practical and comprehensive approach to the state of labour-management relations in Canada. (3 credits) *NOTE A/See § 200.2*

MANAGEMENT C465
Collective Bargaining and Industrial Relations II

Prerequisite: Management C464. This course is designed to help the student to look at day-to-day problems connected with negotiation and administration of collective bargaining agreements. The course puts some stress on the behavioural aspects of industrial relations. (3 credits) *NOTE A/See § 200.2*

MANAGEMENT C467
Management Theory II

Prerequisite: Management C266. This course will attempt to further develop the conceptual framework which was established in Management Theory I. To this end it will examine selected management concepts and appraise their value in terms of their application to the actual practice of business. Issues such as the effect of innovation and technological

change, managing the knowledge worker, organization planning and comparative management will be considered. (3 credits) *NOTE A/See § 200.2*

MANAGEMENT C474
Institutional Administration

Prerequisite: Management C340. Management of institutions and agencies in the non-profit (private and public) sector presents unique opportunities and challenges to the manager. This class will provide an introduction to that field. Emphasis will be given to those characteristics of the organization and functioning of these programmes which distinguish them from commercial firms, including the peculiar nature of human services, and the influence of social-political processes. Class activities will utilize theoretical and case material and field observations. Student projects will concentrate on policy formulation and administrative function in an agency of the students' choice. (3 credits)

MANAGEMENT C475
Business Law I

Prerequisite: Second Year Standing in Commerce. This course deals with the Canadian and Quebec Law governing business organizations and the Quebec Civil Law concerning property, contracts, sales, lease, agency, commercial paper, consumer protection, regulation of finance, warranties and product liability, civil responsibility and obligations. It is essentially the body of law governing the relationships among businessmen and between businessmen and consumers, i.e. private business law. (3 credits)

MANAGEMENT C476
Business Law II

Prerequisite: Management C475. Federal and provincial government regulation of business including bankruptcy, anti-combines, trade marks and patents, labour law, insurance, special commercial contracts including secured transactions, fair employment, environmental law. (3 credits)

MANAGEMENT C477
The Law of Insolvency and Secured Transactions

Prerequisite: Management C475. An examination of the various laws and cases both Federal and Provincial across Canada, governing commercial insolvency with particular emphasis upon the liability of directors and officers and the creditors rights in bankruptcy including the role of inspectors and the trustee. An examination of the various forms of secured transactions, which creditors may avail themselves of, more particularly financial institutions including assignment of book debts, pledge, mortgages, bonds, trust deeds. (3 credits)

MANAGEMENT C478
Company Law

Prerequisite: Management C475. The examination of important legal issues relating to the business corporation including an analysis of their legal nature and structure and the powers, rights and obligations of directors, officers and shareholders, including analysis of the legal implications, insider trading, company re-organization, mergers, joint ventures and takeovers. These matters will be studied through the Federal, Quebec and Ontario Companies' Acts and relevant court cases. (3 credits)

MANAGEMENT C479
Labour Law

Prerequisite: Management C475. A study of the law and relevant court cases dealing with major labour-management issues including collective bargaining, union certification, strike, lock out, grievances and arbitration. Covers Canadian law, primarily Quebec. (3 credits)

MANAGEMENT C499
Special Topics in Administration

Enrolment is restricted and subject to departmental approval. Intended to complement and supplement business courses taken previously or concurrently, this course emphasizes business literature and modern thought. Students are encouraged to work independently on research topics of interest to them. (3 credits) Students repeating Management C499 register for credits under Management C498. *NOTE A/See § 200.2*

61.8 Marketing

Associate Professor and Chairman of the Department
G. R. CURNEW

Professors
V. H. KIRPALANI
B. MALLEN

Associate Professors
K. C. DHAWAN
P. LYNAGH
R. ROTENBERG

Assistant Professors
B. BARBIERI
Z. GIDENGIL *(Visiting)*
V. JONES
L. MCGOWN
P. PASOLD
U. TODOROVIC

Lecturer
A. TOLEDO

Special Lecturers
P. CURRAN
B. DUNHAM
B. ISENBERG
J. MOORE
P. PFEIFER
K. SIMON

61.8.1 PROGRAMMES

24 Major in Marketing

3 Mark C352
3 Mark C402
3 Mark C490
15 Mark credits offered by the Department.

12 Minor in Marketing

3 Mark C352
3 Mark C402
3 Mark C490
3 Mark credits offered by the Department.

61.8.2 COURSE DESCRIPTIONS

MARKETING C213
The Marketing Process (Introductory)

The course examines the nature of marketing and its role in society as well as the inter-relationships that are operative within the marketing process — both external as related to society and the consumer and internal as related to the organization of the marketing process within the firm. Many of the factors influencing these relationships are also examined. (3 credits) *NOTE A/See § 200.2*

MARKETING C350
Marketing Management

Prerequisites: Accountancy C213 and Marketing C213. An introduction to the managerial concepts and practices involved in planning and carrying out corporate marketing policies and strategies. The four basic elements of the marketing mix, product, price, promotion and distribution and their interrelationships will be examined in detail. The case method will also be used in order to apply these concepts to realistic marketing problems. (3 credits)

MARKETING C352
Buyer Behaviour

Prerequisites: Marketing C213, Management C213; and Quantitative Methods C243 and C244. This course analyzes the motivations, roles and behaviour of the industrial buyer and the consumer, how he and she are affected by economic, social and cultural influences, and how the marketer may model this behaviour for decision-making purposes. (3 credits) *NOTE A/See § 200.2*

MARKETING C402
Marketing Research I (Methods)

Prerequisites: Marketing C350 and Quantitative Methods C244. The role of research in marketing process, the role of models, and the development of measurement techniques are discussed. Emphasis is placed on the nature and scope of marketing research methods for obtaining internal and external data and on the steps and principles involved in gathering and analyzing data. The student is also briefly introduced to applications of marketing research. (3 credits) *NOTE A/See § 200.2*

MARKETING C452
Marketing Research II (Application)

Prerequisite: Marketing C402. The application of marketing research to problem areas such as advertising, sales management and product strategy. Alternative research designs are applied to actual problems. (3 credits) *NOTE A/See § 200.2*

MARKETING C453
Advertising and Sales Promotion Management

Prerequisite: Marketing C350. The course deals with the theory and practice of advertising and sales promotion. Through case studies, field trips and simulations the student learns how to analyze media and budgets, plan promotional campaigns, utilize research findings and evaluate advertising effectiveness. (3 credits) *NOTE A/See § 200.2*

MARKETING C454
Sales Management

Prerequisite: Marketing C350. The course deals with the theoretical and applied aspects of the management of personal selling. Through cases, simulations and special presentations the student learns how to recruit, select, train, organize, motivate, evaluate, compensate, supervise and control the sales forces. (3 credits) *NOTE A/See § 200.2*

MARKETING C462
Multinational Marketing Management

Prerequisite: Marketing C350. In this course the student analyzes the major forms of international marketing; the impact of differing environments upon marketing policies and strategies; the segmentation of multinational markets; the development of international channel systems; the roles of marketing in developing countries, in communist countries and in integrated markets and trade blocs. (3 credits) *NOTE A/See § 200.2*

MARKETING C463
Retail Management

Prerequisite: Marketing C213. This course seeks to apply the theories of marketing and administration to the retail situation. Topics to be covered include site selection for single and multi-unit retail outlets, organizing and staffing the retail operation, the wholesaler-retailer relationship, consumer behaviour in the retail situation. The impact of such new developments as consumer cooperatives, franchising, discounting and computer technology on the future of retailing will also be considered. (3 credits) *NOTE A/See § 200.2*

MARKETING C464
Consumerism

Prerequisite: Marketing C213. The current evolution of marketing and consumerism is subjected to critical evaluation and analytical review. Problem areas which may be examined include marketing costs and efficiency, the social objectives of and objections to marketing, the impact of marketing on the environment, the 'pollution of advertising', ethics of marketers, and the role of governments in the market place. (3 credits) *NOTE A/See § 200.2*

MARKETING C465
International Marketing Management

Prerequisite: Marketing C462. This course studies the management approach to international marketing with emphasis on key variables that are controllable by the international marketing manager. Attention is focused on market measurement, product policy, channels, pricing and promotion with special emphasis on the development and control of multinational marketing strategies and programs. (3 credits)

MARKETING C485
Industrial Marketing

Prerequisites Marketing C350 and C352. Products and services to other industrial customers are studied, first at the technical representative and selling level, then at the product manager and new products development level, and finally at the level of industrial marketing management. (3 credits) *NOTE A/See § 200.2*

MARKETING C486
Product Management

Prerequisites: Marketing C213 and C350. In addition to analyzing product cycles and their characteristics and strategies which relate to each stage; this course delves into some of the more practical aspects of product policy setting strategy formulation of the analysis, development and execution of marketing programs for new and existing products. This course should make the student familiar with one or more product management operations through case discussions and/or field studies. (3 credits)

MARKETING C490
Marketing Policy

Prerequisites: Marketing C350 and 9 additional credits in marketing courses. A capstone course in Marketing, utilizing readings, projects and selected case studies requiring the student to incorporate concepts and techniques of previous marketing courses in determining marketing policy. (3 credits) *NOTE A/See § 200.2*

MARKETING C491
Special Projects Seminar

Prerequisite: Permission of the Department. Individual study or special project in marketing field. (3 credits) Students repeating Marketing C491 register for credits under Marketing C492. *NOTE A/See § 200.2*

61.9 Quantitative Methods

Associate Professor and Chairman of the Department
D. WEST

Professor
A. BERCZI
G. PEDERZOLI

Associate Professors
C. BAYNE
D. DOREEN
Z. G. POPP
L. SMITH
S. SRINIVASAN
E. N. WEST
R. O. WILLS

Assistant Professors
A. CLAUS
M. KUSY
L. MOTTOLA
A. RIDING
C. SANDBLOM

Lecturer
J. DEMOCKO

Special Lecturers
J. KHAN
P. MAHLER
B. SMITH
D. SMITH

61.9.1 PROGRAMMES

24 Major in Quantitative Methods

9 QM C316, C327, C345
6 QM C423, C424
3 QM C412, C414, C416
3 QM C444, C447, C448
3 QM C425, C426

12 Minor in Business Statistics

3 QM C345
3 QM C444
3 QM C447
3 QM C448

12 Minor in Business Systems

3 QM C327
3 QM C423
3 QM C424
3 QM C425, C426

12 Minor in Quantitative Methods

3 QM C316, C345, C327
3 QM C412, C414, C416
3 QM C444, C447, C448
3 QM C425, C426

12 Minor in Managerial Operations Research

3 QM C316
3 QM C412
3 QM C414
3 QM C416

61.9.2 COURSE DESCRIPTIONS

QUANTITATIVE METHODS C243
Introductory Business Statistics I

Prerequisites: One CEGEP course in each of Algebra and Calculus, or equivalent. The objectives of the course are to introduce the student to applications of statistics in managerial decision-making. Topics covered include descriptive measures, frequency distribution analysis, probability theory, probability distributions, estimation, hypothesis testing. All examples will be derived from the functional areas of business, including Finance, Accounting, Production, Purchasing, Marketing, etc. (3 credits)

QUANTITATIVE METHODS C244
Introductory Business Statistics II

Prerequisite: QM C243 or equivalent. This course offers further development of probability and statistics concepts needed for management decisions. Topics covered include regression and correlation analysis, forecasting and smoothing techniques, time series analysis, sampling theory, quality control and analysis of variance. The usefulness of these techniques in managerial applications will be discussed with examples, problems and cases. (3 credits)

QUANTITATIVE METHODS C313
Managerial Operations Research

Prerequisites: QM C243 and C244, or equivalent. This course is an introduction to managerial operations research and its role and function in executive decision. It emphasizes both assumptions and management applications. The basic areas covered include: formulation, solution techniques, optimization concepts and model building; linear programming and related economic interpretation; transportation problems; transshipment problems; assignment problems; network analysis (CPM and PERT); game theory. (3 credits)

QUANTITATIVE METHODS C314
Operations Research and Production Systems

Prerequisite: QM C313 or equivalent. This course is an extension of QM C313. The basic areas covered include: Managerial Decision theory and utility theory, inventory control; waiting lines: time and motion studies; plant lay-out; design of the production planning systems; capacity planning models; sequencing and routing; Markov chains and applications; simulation. (3 credits)

QUANTITATIVE METHODS C316
Optimization Techniques

Prerequisite: QM C313 or equivalent. This course deals with optimization techniques in Management Sciences. It includes: linear programming, simplex algorithm, sensitivity testing and duality, postoptimality analysis; separable programming; dynamic programming; integer programming; non-linear programming; stochastic programming; multiplier theory. Management applications such as portfolio selection, capital budgeting, production smoothing, inventory scheduling, competitive strategies, regeneration models will be given particular attention. (3 credits)

QUANTITATIVE METHODS C327
Business Systems

This course provides a panoramic view of the systems tools, techniques and equipment and relates them to practical situations arising in an enterprise in this age of change. Topics covered include: translation of management objectives into business system procedures and methods, organization planning, project control techniques, work measurements, information gathering, processing, distribution and retention equipment from simple office machines to computers. Applications of Finance, Accounting, Marketing, Budgeting and Production systems will be discussed. (3 credits)

QUANTITATIVE METHODS C345
Business Decision Analysis

Prerequisites: QM C243 and C244 or equivalent. This course deals with the analysis of choices under uncertainty. It provides a coverage of Bayesian inference, decision theory, prior, posterior and pre-posterior distributions (discrete and continuous). It includes the analysis of uncertain payoffs and biased measurements, analytical utility functions and their properties; the use of judgment probability and the principle of substitution for strategies. Economics of sampling, risk sharing, group decision will also be considered. Examples of decision making in production planning, research and development, manpower planning, finance etc. will be presented and discussed. (3 credits)

QUANTITATIVE METHODS C353
Mathematical Analysis for Business—Calculus

Prerequisites: One CEGEP course in each of Intermediate Algebra and Calculus or equivalent. The various applications of differential and integral calculus and the use of difference and differential equations in the functional areas of management, e.g., production, marketing, accounting, and finance, personnel administration, and purchasing will be studied. (3 credits) *NOTE A/See § 200.2*

QUANTITATIVE METHODS C354
Mathematical Analysis for Business—Matrix Algebra

Prerequisites: One CEGEP course in each of Intermediate Algebra and Calculus or equivalent. Properties and applications of matrix algebra in the functional areas of management, e.g. production, marketing, accounting and finance, personnel administration and purchasing, will be studied. Special applications (e.g. Input-Output Analysis) will be explored. (3 credits) *NOTE A/See § 200.2*

QUANTITATIVE METHODS C412
Network Optimization Models

Prerequisites: QM C313 and C314 or equivalent. This course includes a detailed study of Network Models in Management Sciences. It includes classical transportation problem; transshipment model; assignment model; shortest-route algorithms in cyclic and acyclic networks; critical path scheduling; maximum flow through a capacitated network; out-of-kilter algorithm multicommodity network. Special applications to production scheduling, employment engagement, machine replacement, allocation situations, catering problems will be considered. (3 credits)

QUANTITATIVE METHODS C414
Operations Research Models in the Social Environment

Prerequisites: QM C313 and C314 or equivalent. This course is designed to keep the student informed of most recent and successful applications of Operations Research Models in the Social Environment. The topics to be discussed will be selected from: Criminal Justice, Educational Systems, Pollution, Rural and Agricultural Models, Transportation, Energy Models etc. (3 credits)

QUANTITATIVE METHODS C416
Inventory, Replacement, Maintenance Models

Prerequisites: QM C313 and C314 or equivalent. This course covers deterministic inventory models, stochastic inventory models, special structures of inventory control practice; replacement of items which deteriorate with time; replacement of items which fail suddenly, staffing problems; maintenance models; reliability theory; analysis of operational warranty techniques; renewal theory and managerial applications. (3 credits)

QUANTITATIVE METHODS C423
Computers and Data Processing

Prerequisite: Computer Science S211 or equivalent. This course provides an introduction to business data processing. It introduces the Common Business Oriented Language (COBOL) and concentrates on mass storage characteristics and techniques with special reference to file organization and design. Basic

business applications (e.g. accounts receivable, inventory, payroll, forecasting) will be studied. (3 credits) *NOTE A/See § 200.2*

QUANTITATIVE METHODS C424
Data Processing Systems and Applications

The course will survey and study the various currently available data processing systems and their applications (e.g. time sharing, real time, multi-programming and multi-processing, data communications, computer utilities). The selection and evaluation of both hardware and software will be discussed. This is an appreciation course oriented towards the potential user. (3 credits) *NOTE A/See § 200.2*

QUANTITATIVE METHODS C425
Business Systems Analysis and Design

Prerequisite: Computer Science S211 or equivalent. This is an introductory course in business systems theory. It will study the various characteristics and nature of business systems. System components and input-processing-output relationships will be examined and the methodology and techniques of systems design and analysis will be explored. (3 credits) *NOTE A/See § 200.2*

QUANTITATIVE METHODS C426
Business Systems Simulation and Control

Prerequisite: Computer Science S211, Quantitative Methods C244, and C314; or equivalent. Digital simulation of stochastic and deterministic business sub-systems will be studied and executed in FORTRAN; various other simulation languages and models will be reviewed and evaluated; large scale simulation models (total system approach) and computer oriented management planning and control models will be examined. (3 credits) *NOTE A/See § 200.2*

QUANTITATIVE METHODS C433
Topics in Quantitative Methods

Prerequisite: Permission of the Department. This course is intended primarily for honours or major students, and affords an opportunity for more intensive examination of one or more particular topics in quantitative methods. The specific subject will vary according to the special interest of the professor offering the course in any given year. (3 credits) Students repeating Quantitative Methods C433 register for credits under Quantitative Methods C434 *NOTE A/See § 200.2*

QUANTITATIVE METHODS C444
Business Experimental Analysis

Prerequisites: QM C243 and C244 or equivalent. This course deals with the design and the analysis of experiments which are relevant to the decision-maker in management fields. It includes analysis of variance; orthogonal classification; factorial experiments; block designs; mixed models; replication; calibration studies; economics of experimentation; non-parametric statistical inference; discriminant analysis. All functional areas of management application will be considered and used as examples and in cases. (3 credits)

QUANTITATIVE METHODS C447
Statistical Forecasting

Prerequisites: QM C244 or equivalent. This course presents the foundations of applied time series analysis for managerial forecasting. It includes forecasting methods and objectives; fundamental concepts in time series analysis; models for stationary time series; model for nonstationary time series; models for seasonal time series; Box and Jenkins methods; forecast evaluation. (3 credits)

QUANTITATIVE METHODS C448
Business Sampling Techniques and Quality Control

Prerequisites: QM C243 and C244 or equivalent. This course consists of two parts. Part 1 deals with the different sampling methodologies and their applications to managerial problems. Problems relating to sampling of accounts receivable and payable, audit control, accounting information system, evaluation of inventories, market research studies, and assembly line situations, will be studied in detail. The second part involves understanding the use of different quality control charts (C Chart, U Chart, X and R Charts) in production and marketing environment. (3 credits)

61.10 Economics

MAJOR

Up to 30 credits (beyond the core) in Economics to be specified by the Economics Departments.

MINOR

Course programme to be determined by Economics Departments where applicable.

61.10.1 LOYOLA CAMPUS

For a more detailed description of these courses refer to § 51.10.3

Economics L202
Principles of Economics
(6 credits)

Economics L209
Introduction to Microeconomics
(3 credits)

Economics L210
Introduction to Macroeconomics
(3 credits)

Economics L304
Economic History
(6 credits)

Economics L307
The Chinese Economy
(3 credits)

Economics L309
Intermediate Microeconomic Theory I
(3 credits)

Economics L311
Intermediate Macroeconomic Theory I
(3 credits)

Economics L313
Intermediate Microeconomic Theory II
(3 credits)

Economics L315
Intermediate Macroeconomic Theory II
(3 credits)

Economics L322
Mathematics for Economists
(6 credits)

Economics L333
Economics of the Environment
(3 credits)

Economics L338
Contemporary Economic Issues
(6 credits)

Economics L401
Theories of Economic Growth
(3 credits)

Economics L402
Labour Law
(6 credits)

Economics L403
Planning for Economic Growth
(3 credits)

Economics L404
Statistical Methods
(6 credits)

Economics L405
Economic Fluctuations
(3 credits)

Economics L407
Money and Banking
(3 credits)

Economics L411
Economics of Transportation and Communications
(3 credits)

Economics L413
Economics of Socialism
(3 credits)

Economics L414
Economic History of Canada
(6 credits)

Economics L418
Regional Economics
(6 credits)

Economics L434
Comparative Economic Systems
(6 credits)

Economics L436
Economic Welfare and Governmental Activity
(6 credits)

Economics L438
Labour Economics
(6 credits)

Economics L440
Economics of Social Welfare
(6 credits)

Economics L445
Structure of the Economy and Public Policy
(3 credits)

Economics L447
International Trade
(3 credits)

Economics L448
Industrial Relations
(6 credits)

Economics L449
International Finance
(3 credits)

Economics L451
Welfare Economics
(3 credits)

Economics L455
Introduction to Econometrics
(3 credits)

Economics L462
History of Economic Thought
(6 credits)

Economics L465
Advanced Microeconomic Analysis
(3 credits)

Economics L467
Advanced Monetary and Income Theory
(3 credits)

Economics L471
An Introduction to Linear Programming and Input-Output Analysis
(3 credits)

Economics L481
Advanced Macroeconomic Analysis
(3 credits)

Economics L491
Honours Thesis
(3 credits)

61.10.2 SIR GEORGE WILLIAMS CAMPUS

For a more detailed description of these courses refer to § 41.15.2.

Economics S209
Introduction to Microeconomics
(3 credits)

Economics S210
Introduction to Macroeconomics
(3 credits)

Economics S221
Introduction to Economic History
(6 credits)

Economics S270
Mathematics for Economists I
(3 credits)

Economics S271
Mathematics for Economists II
(3 credits)

Economics S274
The Use of Economic Data
(3 credits)

Economics S304
Canadian Economic Policy I
(3 credits)

Economics S305
Canadian Economic Policy II
(3 credits)

Economics S306
Monopoly, Competition, and Regulation
(3 credits)

Economics S307
Economics of the Environment
(3 credits)

Economics S308
Economics of Natural Resources
(3 credits)

Economics S309
Economics of Human Resources
(3 credits)

Economics S310
Economics of Discrimination
(3 credits)

Economics S318
Intermediate Macroeconomic Theory
(6 credits)

Economics S375
Introduction to Statistics for Economists
(3 credits)

Economics S411
Advanced Microeconomic Theory
(3 credits)

Economics S412
Mathematical Economics I
(3 credits)

Economics S413
Mathematical Economics II
(3 credits)

Economics S415
History of Economic Thought
(6 credits)

Economics S418
Advanced Macroeconomic Theory
(3 credits)

Economics S420
Economics of the Public Sector
(6 credits)

Economics S422
International Economic Relations
(3 credits)

Economics S423
Theory of International Trade
(3 credits)

Economics S426
Urban Economics
(3 credits)

Economics S427
Regional Economics
(3 credits)

FACULTY OF COMMERCE AND ADMINISTRATION
61.10.2
ECONOMICS: SIR GEORGE WILLIAMS CAMPUS

Economics S428
Labour Economics
(3 credits)

Economics S429
Industrial Relations
(3 credits)

Economics S430
Economic History of Europe
(6 credits)

Economics S434
Economic History of Canada
(6 credits)

Economics S438
Economic History and Development of the United States
(6 credits)

Economics S440
Economic Development
(6 credits)

Economics S442
Quantitative Development Economics I
(3 credits)

Economics S443
Quantitative Development Economics II
(3 credits)

Economics S446
The Economic Development of Quebec
(3 credits)

Economics S460
Comparative Economic Systems
(6 credits)

Economics S464
Marxian Economics
(3 credits)

Economics S465
Soviet Economics
(3 credits)

Economics S468
Theory and Practice of Corporation
(6 credits)

Economics S476
Econometrics I
(3 credits)

Economics S477
Econometrics II
(3 credits)

Economics S490
Study in a Special Subject
(6 credits)

Economics S491
Study in a Special Subject
(6 credits)

Economics S493
Study in a Special Subject
(3 credits)

Economics S494
Study in a Special Subject
(3 credits)

61.11 Computer Science

Faculty of Arts and Science, Loyola Campus

Students in the Bachelor of Administration programme may, on completion of their core programme, select their electives from the offerings of the Computer Science Department. The course programme specified by that Department may lead to a Major or Minor in Computer Science where applicable.

90 Major in Data Processing

Year I
6 Acc C213, C214
6 Q M C243, C244
6 Comp Sc L221, L223
6 Commerce Elective credits
6 Elective credits

Year II
6 Acc C217, C218
6 Fin C215, C314
12 Comp Sc L311, L313, L451, L555
6 Commerce Elective credits

Year III
6 Q M C313, C314
18 Comp Sc L521, L523, L525 and 3 Elective credits
6 Elective credits

NOTE: This Programme is subject to change after the Academic Year 1976/77.

61.12 Additional Courses for Commerce Students

COMPUTER SCIENCE

Courses in Computer Science are available as electives to Commerce students. Refer to § 51.9.3 and § 71.8.2 of this calendar for a complete listing.

FINE ARTS

The following course in Fine Arts is available to Commerce students.

THEATRE C320
Theatre Administration

A course in theatre administration covering office and plant management, production, touring, and prepackaged plant costing; contracts, insurances, budgeting and seasonal planning. Lectures with actual case studies in depth. (6 credits)

61.12.1 NON-CREDIT COURSES

The following courses, are offered from time to time to meet the needs of various business organizations. They do not carry credits towards the Bachelor of Commerce degree. Students must consult the timetable to determine which of the following courses are offered in the current academic year.

BUSINESS C221 (NON-CREDIT)
Office Management

A course in the principles of office management, including such topics as the function of the office in business; organization and principles of control; office systems and routines; office equipment and labour saving devices; office planning and layouts; selection and training of office personnel; office communications.
NOTE: This course was previously designated as Administration 221. Students who have taken Administration 221 should not take this course.

BUSINESS C222 (NON-CREDIT)
Procurement Principles

This course is designed to cover the fundamentals of purchasing policies and procedures and the organization and functions of the purchasing department in business and industry. Topics covered will include pricing, negotiation, quality and quantity determination, budgetary institutions etc., as well as the relationship between purchasing and other management functions. Class discussion and case studies are the basic method of study employed.
NOTE: This course was previously designated as Administration 442 and 443. Students who have taken Administration 442 and/or 443 should not take this course.

BUSINESS C223 (NON-CREDIT)
Business Systems

This course is designed primarily for students with practical business experience, managers, and potential system men. It provides a panoramic view of the systems tools, techniques and equipment and relates them to practical situations arising in an enterprise in this age of change. Topics

covered include: translation of management objectives into business system procedures and methods; organization planning; fact finding and related tools such as flow charting, work measurement, information requirement studies; selling implementation and management of system and organization changes including planning, presentation and documentation tools such as a critical path scheduling, decision table construction, procedure writing, project control techniques; information gathering, processing, distribution and retention equipment from simple office machines to computers.
NOTE: This course was previously designated as Executive Training 441 and 442. Students who have taken Executive Training 441 and/or 442 should not take this course.

BUSINESS C241 (NON-CREDIT)
International Trade

The fundamental and practical aspects of importing and exporting, covering such subjects as trade terms and definitions, import and export regulations; export credits insurance; customs regulations; handling of export traffic; trading documents; air cargo and air express; marine insurance; financing.
NOTE: This course was previously designated as Marketing 241. Students who have taken Marketing 241 should not take this course.

BUSINESS C251 (NON-CREDIT)
Transportation and Traffic (Introductory)

This course in freight traffic management is primarily for students who wish to specialize in this line of endeavour. It covers the practical aspects of transportation in Canada including such matters as bills of lading and shipping procedures; special services of railways; express; claims and claims preventions; freight contracts; marine insurance; customs; interpretation of the railway act and railway law.
NOTE: This course was previously designated as Marketing 251. Students who have taken Marketing 251 should not take this course.

BUSINESS C252 (NON-CREDIT)
Transportation and Traffic (Advanced)

Prerequisite: Business 251. This course in freight traffic management is primarily for students who wish to specialize in this line of endeavour. It covers the practical aspects of transportation in Canada including such matters as tariff construction and freight rate structures; condition of carriage; ocean freight contracts; marine insurance; customs; interpretation of the railway act and railway law.
NOTE: This course was previously designated as Marketing 252. Students who have taken Marketing 252 should not take this course.

BUSINESS C260 (NON-CREDIT)
Basic Mathematics for Business

Review of elementary algebraic operations; fractions, ratios, proportions, percentages, simple equations, arithmetic and geometric progressions, logarithms; graphical algebra; simple and compound interest; annuities, amortization and sinking funds, depreciation and bond values; simple business statistics including: the collection of statistical data, various methods of presentation including tables and graphs, the frequency distribution and its mathematical analysis including averages, measures of dispersion, measures of skewnesses, normal curve, and correlation.

61.13 Special Programmes in Accountancy

The Quebec business community is served by three professional accountancy organizations, whose members, after rigorous training and successful completion of professional examinations, are granted diplomas and professional designations. These are the:

Order of Chartered Accountants of Quebec: CHARTERED ACCOUNTANT (C.A.)

Professional Corporation of Registered Industrial Accountants of Quebec: REGISTERED INDUSTRIAL ACCOUNTANT (R.I.A.)

Professional Corporation of Certified General Accountants of Quebec: CERTIFIED GENERAL ACCOUNTANT (C.G.A.)

Graduates of Concordia University who have taken appropriate courses recognized by these organizations, are usually exempted from a substantial portion of the courses in the organizations' educational programmes which lead to being granted permission to write their professional examinations. Students interested in obtaining any of the above designations may obtain further information from the respective organization or the Department of Accountancy.

61.14 Special Certificate Programmes

There are many organizations within the business community designed to serve the needs of people working in specialized areas of business. These organizations recognize that the educational qualifications of those seeking membership must be continually upgraded. Therefore, they sponsor an Academic Certificate which may be obtained through correspondence courses or through a lecture programme.

The Faculty of Commerce and Administration cooperates with these business organizations by permitting personnel to register as independent (partial) students, and to take courses leading to a certificate to be awarded by the organization concerned.

Students must comply with the University regulations regarding dates of application and independent (partial) student entrance requirements as outlined in the Academic Calendar § 11. In addition to this, they must meet the requirements of the specific organization.

The credit course taken may be applied towards the Bachelor of Commerce degree provided the student meets the admission requirements and wishes to transfer from independent (partial) status to undergraduate status after completing a certificate programme. Students are advised that they must meet the Bachelor of Commerce curriculum requirements in force at the date of transfer.

Each certificate programme has one or more special courses required to complete the programme. These courses do not carry credit toward a Bachelor's degree and are designated as non-credit courses.

Students interested in the following certificate programmes will obtain details of required courses from the organization concerned:

The Administrative Management Society (Montreal Chapter) Inc.

The American Marketing Association (Montreal Chapter)

The Institute of Chartered Secretaries & Administrators

The Canadian Association of Purchasing Agents (Montreal Division)

Data Processing Management Association (Montreal Chapter)

Institute of Canadian Bankers

The Montreal Personnel Association

The Systems and Procedures Association of America (Montreal Chapter)

61.15 Commerce & Administration Consultative Committee

The purpose of this committee is the maintenance of a continuing and constructive relationship and dialogue between the Faculty of Commerce and Administration and a broadly representative group of senior business executives. In this way the relevance of the work of the Faculty to the needs of the business community is kept under review, while the objectives, roles and accomplishments of the Faculty and the qualifications of its graduates are made better known in business circles.

The personnel of the Committee comprises senior members of the business community, senior faculty representatives and also representatives of student organizations.

Chairman
WILLIAM T. G. HACKETT, *Special Lecturer, Department of Finance*

Vice-Chairman (Business)
DAVID E. SLOAN, *Treasurer, Canadian Pacific Limited*

Vice-Chairman (Academic)
BRUCE MALLEN, *Professor, Department of Marketing*

BUSINESS

DONALD S. BARTLETT, *President, Bar-Well Foods Ltd.*

J. H. BIRKETT, *Vice-President Administration and Director, Celanese Canada Limited*

MARGARET E. CAMERON, *Vice-President and Secretary Treasurer, McLean Budden Limited*

RUPERT B. CARLETON, *Vice-President and General Counsel, Cemp Investments Limited*

MARCEL CAZAVAN, *Chairman and General Manager, Caisse de Depot et Placement du Quebec*

STANLEY D. CLARKE, *President, Clarke Transportation Canada Ltd.*

CREIGHTON CROSS, *Vice-President, Business, Planning & Development, Alcan Smelters & Chemicals Ltd.*

JAMES N. DOYLE, *Vice-President, Steinberg's Limited*

G. G. DUNNIGAN, *Group Vice-President, Steetley Industries Limited*

A. FISHER, *President, FBI Foods Limited*

LEO GOLDFARB, *Executive Vice-President and Chief Operating Officer, Trizec Corporation*

MARTHE HATCH, *Director, Marketing Research, La Brasserie Molson du Québec, Ltée.*

WALTER J. McCARTHY, *Senior Vice-President, Finance, Sun Life Assurance Company of Canada*

PAUL BRITTON PAINE, *Chairman and President, Montreal Trust Company*

RONALD H. PEROWNE, *President, Dominion Textile Limited*

HARRY PILKINGTON, *Vice-President, Personnel, Bell-Canada*

A. J. FRED PRINCE, *President, Johnson & Johnson Limited.*

R. J. REDDING, *Vice-President, Marketing, Petrofina Canada Limited*

GARD ROBERTSON, *Senior Vice-President, Personnel Head Office, Bank of Montreal*

FACULTY OF COMMERCE AND ADMINISTRATION
61.15
COMMERCE AND ADMINISTRATION CONSULTATIVE COMMITTEE

THE HON. MAURICE SAUVE, *P.C. Vice-President, Administration, Consolidated-Bathurst Limited*

DAVID E. SLOAN, *Treasurer, Canadian Pacific Limited*

HERBERT O. SPINDLER *Partner, Coopers & Lybrand*

NICHOLAS TAKACSY, *Vice-President and Director, Greenshields Incorporated*

FACULTY

ANDREW BERCZI, *Dean of the Faculty of Commerce & Administration*

GUNTHER BRINK, *Director, Ph.D. Program*

JEAN PIERRE BRUNET, *Assistant Professor, Department of Management*

RONALD L. CRAWFORD, *Chairman, Department of Management*

G. ROBERT CURNEW, *Chairman, Department of Marketing*

GARY JOHNS, *Director, M.B.A. Programme*

VERNON JONES, *Assistant Professor Department of Marketing*

HARVEY MANN, *Chairman, Department of Accountancy*

CALVIN C. POTTER, *Chairman, Department of Finance*

L. A. SMITH, *Chairman, Undergraduate Curriculum Committee*

DONALD C. WEST, *Chairman, Department of Quantitative Methods*

ERIC N. WEST, *Chairman, Graduate Studies*

ROLAND O. WILLS, *Associate Professor, Department of Quantitative Methods*

STUDENTS

JUDY ABBOTT, *Commerce Representative, Part-Time Students Association*

DANIEL HRYCYK, *President, Commerce Students Association (Sir George Williams Campus)*

R. K. KERKLAAN, *President, M.B.A. Students Association*

PATRICIA TINGLE, *President, Commerce Students Association (Loyola Campus)*

SUB-COMMITTEES:

Student-Business Relations
Curriculum
Internship and Job Placement
Special Projects

71 Faculty of Engineering

Table of Contents

71.1 FACULTY OF ENGINEERING

71.2 BACHELOR OF ENGINEERING PROGRAMME

- 71.2.1 Admission Requirements
- 71.2.2 Curriculum for the Degree of Bachelor of Engineering
- 71.2.3 Membership in the Order of Engineers of Quebec
- 71.2.4 Accreditation by the Canadian Council of Professional Engineers
- 71.2.5 Programmes of Study

71.3 GENERAL REQUIREMENTS

- 71.3.1 Academic Regulations
- 71.3.2 Additional Regulations for the Bachelor of Engineering
- 71.3.3 French Language Requirement
- 71.3.4 Course Requirements
- 71.3.5 Graduation Requirements
- 71.3.6 First Year Programmes

71.4 DEPARTMENT OF CIVIL ENGINEERING

71.5 DEPARTMENT OF ELECTRICAL ENGINEERING

71.6 DEPARTMENT OF MECHANICAL ENGINEERING

71.7 COURSE DESCRIPTIONS

71.8 DEPARTMENT OF COMPUTER SCIENCE

- 71.8.1 Bachelor of Computer Science Programme
- 71.8.2 Course Descriptions

71.9 CERTIFICATE PROGRAMME IN QUALITY CONTROL

71.1 Faculty of Engineering

Dean
J. CLAIR CALLAGHAN

Vice-Rector, Academic, and Professor of Engineering
JACK BORDAN

Vice-Rector, Administration and Finance, and Associate Professor of Computer Science
GRAHAM MARTIN

Associate Dean (Loyola Campus)
GEORGE W. JOLY

Assistant Dean, Academic Programmes Engineering and Computer Science
J. CHARLES GIGUERE

Chairman, Department of Civil Engineering
PAUL P. FAZIO

Chairman, Department of Electrical Engineering
M.N.S. SWAMY

Chairman, Department of Mechanical Engineering
T.S. SANKAR

Chairman, Department of Computer Science
H. STANLEY HEAPS

Director, Personnel and Resources (Loyola Campus)
STANLEY J. KUBINA

Note:

The following programmes are offered in the Faculty of Engineering:
(1) Bachelor of Engineering degrees in Civil, Electrical and Mechanical Engineering;
(2) Bachelor of Computer Science degree;
(3) *Certificate in Quality Control.*

The requirements for the three programmes are different, and the appropriate section in the following pages must be consulted for each.

71.2 Bachelor of Engineering Programme

71.2.1 ADMISSION REQUIREMENTS

Applications for admission to the BEng programme are submitted to the Admissions Office at the preferred campus.

Students are normally admitted in September for programmes in the Day Division, Evening Division or Industrial Parallel Studies, and to one of the Departments of Civil, Electrical and Mechanical Engineering.

On the Sir George Williams campus, applicants are also accepted to the First Year, Day Division, in January, and courses are scheduled to make it possible for them to enter Second Year in September of the same calendar year.

General Admission requirements are listed in § 13.

Specific requirements are those contained in the CEGEP pre-Engineering profile or their equivalent, that is:

	CEGEP
Biology	301
Chemistry	101
	201
Mathematics	101
	103
	105
	203
Physics	101 or 102
	201 or 202
	301 or 302

Application from graduates of CEGEP technology programmes will also be considered. Such applicants admitted to the undergraduate programme may be required to take certain special courses.

71.2.2 CURRICULUM FOR THE DEGREE OF BACHELOR OF ENGINEERING

The University offers a programme leading to the degree of Bachelor of Engineering in the fields of Civil, Electrical and Mechanical Engineering. To be recommended for the degree of Bachelor of Engineering, students must satisfactorily complete all the General Requirements and all the requirements of the department in which they are registered. The General Requirements are given below and comprise the Graduation Regulations, the French Language Requirement and a uniform group of courses, as well as the Academic Regulations; all are common to the three departments. The individual Department Requirements are given in subsequent sections. They comprise a group of required courses with a group of elective courses which allow students to select part of their programme to provide some depth in an area of specialization according to their particular interests or breadth in the general field of their chosen department.

In their final undergraduate year, students with high standing may be granted permission by their department and the Engineering Graduate Studies Committee to register for a limited number of graduate courses offered

by the Faculty in lieu of some courses in the undergraduate programme.

71.2.3 MEMBERSHIP IN THE ORDER OF ENGINEERS OF QUEBEC

The Order of Engineers of Quebec (OEQ) has fully accredited the Bachelor of Engineering curricula in Civil, Electrical, and Mechanical Engineering; and will admit graduates of these three programmes as members according to the Engineers Act and the OEQ By-Laws and providing applicants can show a working knowledge of French.

71.2.4 ACCREDITATION BY THE CANADIAN COUNCIL OF PROFESSIONAL ENGINEERS

The Accreditation Board of the Canadian Council of Professional Engineers (CCPE) has accredited the Bachelor of Engineering curricula in the Departments of Civil, Electrical, and Mechanical Engineering. The Board has recommended to the Constituent Associations of CCPE that graduation from the above curricula be considered as sufficient academic qualification for purposes of registration in all Provinces and Territories in Canada.

71.2.5 PROGRAMMES OF STUDY

Successful completion of the BEng degree programme requires hard work and considerable dedication on the part of each student. Courses are presented with the expectation of an average of about two hours of "outside" work for each lecture hour and about one-half hour of "outside" work for each hour spent in the laboratory for all programmes of study.

Programmes of study are available in both the Day and Evening Divisions as described below. Students are subject to the same regulations regardless of their programme of study.

(1) Day Division

Scheduling of the BEng programme in the Day Division is designed to allow students to graduate at the end of six to eight terms of successful study after entry with the minimum admission qualifications.

In 1977/78 the first four terms of the six-and eight-term sequences are scheduled at both the Loyola and Sir George Williams campuses. The remaining terms are scheduled at the Sir George Williams campus only. Students should consult with a faculty adviser concerning their individual programmes of study.

(2) Evening Division

The programme of study in the Evening Division at the Sir George Williams campus offers an opportunity for part-time study of engineering fundamentals. A limited number of courses is offered annually from those marked † in the lists in § 71.3 to § 71.6. Any special courses offered for graduates of CEGEP technology programmes admitted to Engineering undergraduate studies will also be offered in the Evening Division. Students will normally register for three courses per term, but they should consider their employment commitments as well as their academic ability in planning their programmes.

Evening Division students registered in the BEng programme must subsequently transfer to the Day Division to complete the requirements for that degree. An application for transfer to the Day Division will be considered when the applicant has completed the first year programme of the department in which he intends to continue his studies. Evening to Day transfers will be approved for the fall term only.

(3) Industrial Parallel Studies

Industrial Parallel Studies (IPS) are available in the Day Division at the Sir George Williams campus. They are offered for students who have successfully completed the First Year of the programme, or its equivalent, and whose employers are prepared to certify that they will be employed for a maximum of 20 hours per week during Winter Sessions. The Faculty timetable is arranged to allow students undertaking IPS to attend the University for either five half days or two and one-half days per week.

Priority for IPS is given to students who have completed the First Year of the programme in the Evening Division. All students undertaking such studies must have been granted permission by the office of the Assistant Dean, Academic Programmes, Engineering and Computer Science, from whom the pamphlet *Industrial Parallel Studies*, giving more detailed information, can be obtained upon request.

71.3 General Requirements

71.3.1 ACADEMIC REGULATIONS

Students should refer to the section presenting the Academic Regulations of the University, § 16.

71.3.2 ADDITIONAL REGULATIONS FOR THE BACHELOR OF ENGINEERING

Subject to the Senate Approval

Definitions

Programme: The programme consists of

i) All courses and other requirements specified in § 71 for the BEng degree, and/or

ii) All courses and other requirements specified in § 14. for the Pre-Engineering Mature Student programme, or,

iii) Any modifications to i) and ii) as specified by the Faculty on an individual basis.

Academic Year: A period of time which includes a Summer and its subsequent Fall and Winter terms.

Appropriate member of the Dean's Office: As appointed by the Dean of Engineering.

Student Adviser: Faculty member responsible for counselling students.

Objectives

The objectives of these regulations are:

First, to ensure that students can, with the assistance or intervention of the Faculty, assess themselves objectively, and plan programmes of study designed to meet their individual needs.

Second, to ensure that the Faculty can certify that each of its graduates is qualified to enter the Engineering profession.

Grading System

See 16.3 for the Concordia grading system. Results for courses specified in 71 for the B.Eng. degree are to be submitted as letter grades only, (e.g. C−, B+, A)

Regulations

1. At the completion of that term of study which includes for the first time, at least four of the courses specified in 71 for the B.Eng. degree, full-time students who have achieved c− or better in each of at least ⅔ of the courses for which they are registered, with no more than one failing grade, may register for six courses in the following term (See Table 1). Students thus registered, who do not meet this requirement, will have their programme for the next term determined by the appropriate member of the Dean's office in consultation with their adviser.

2. Student's standings are assessed at the end of each academic year providing they have registered for at least four courses in the programme subsequent to their previous assessment, or in the case of a first assessment, subsequent to their admission to the programme. Standings of students requiring fewer than four courses to complete the BEng programme will be determined on the basis of only those courses registered for in that academic year.

The assessment is based on the grades obtained for all courses in the programme for which they have registered, subsequent to their previous assessment, or in the case of a first assessment, subsequent to their admission to the programme. A grade obtained as a result of writing a supplemental examination and/or completing the work for a course graded "INC" is not included in the assessment.

3. Students' standings are determined according to the following criteria:

Acceptable Standing

"C−" or better in each of at least two-thirds of the courses registered for with no more than one failure if eight or fewer courses have been registered for, or two failures if more than eight courses have been registered for. (See TABLE 1)

Conditional Standing

"C−" or better in each of at least one-half of the courses registered for, with no more than two failures if eight or fewer courses have been registered for, or three failures if more than eight courses have been registered for. (See TABLE 2)

Failed Standing

Failure to meet the criteria for acceptable or conditional standings, or conditional standing over two consecutive assessments.

4. Students in acceptable standing may proceed subject to the following conditions:

Each failing grade must be cleared by passing the supplemental examination and/or completing the work for the course, or by repeating the failed course, or by replacing the failed course by an alternative approved by the student's Department.

5. Students in conditional standing may proceed for one year of study subject to the following conditions:

a) They must repeat successfully all courses in which failing grades were obtained, or replace them by alternatives approved by the appropriate member of the Dean's Office in consultation with the student's Department.

b) They must repeat or replace by approved alternatives at least one-half of those courses in which they obtained grades in the "D" range. The specific courses to be repeated will be determined by the appropriate member of the Dean's Office in consultation with the student's Department.

c) Full-time students may register for a maximum of five courses per term, part-time students for a maximum of two courses per term.

d) They must return to acceptable standing by the end of their next year of study, or else be classed as failed students.

6. Subject to regulation 7 below, failed students may be considered for re-admission upon application to the appropriate member of the Dean's Office. If re-admitted, they will be placed on academic probation, the conditions of their probation to be determined at the time of their re-admission. They must return to good standing at the time of their next assessment.

7. Failed students who were previously classed as failed students must withdraw from the University.

71.3.3 FRENCH LANGUAGE REQUIREMENT

All undergraduates registered for the BEng degree are required to pass, or be

TABLE 1 — Minimum Criteria for Acceptable Standing

No. of Courses	4	5	6	7	8	9	10	11	12	13
Min. No. of Grades of "C−" or above	3	4	4	5	6	6	7	8	8	9
Max. No. of Failing Grades	1	1	1	1	1	2	2	2	2	2

TABLE 2 — Minimum Criteria for Conditional Standing

No. of courses	4	5	6	7	8	9	10	11	12	13
Min. No. of Grades of "C−" or above	2	3	3	4	4	5	5	6	6	7
Max. No. of Failing Grades	2	2	2	2	2	3	3	3	3	3

exempt from, a French language examination at some time prior to graduation. Students whose previous education was conducted in the French language are exempt from this requirement upon application to the Assistant Dean, Academic Programmes, Engineering and Computer Science. Foreign students attending the University on a student visa at the start of the calendar year in which they expect to graduate are also exempt upon similar application.

Examinations will be held in the Fall and Spring terms of each year. It is recommended that students who do not have sufficient background in the French language take an appropriate French language course during their first year of study. *This requirement is independent of the French Language requirement of the Order of Engineers of Quebec.*

71.3.4 COURSE REQUIREMENTS

To be recommended for the degree of Bachelor of Engineering, students admitted after January 1977 must satisfactorily complete the following courses as well as those specified by their departments, as shown in subsequent sections. Students admitted for January 1977 or earlier should consult the 1976/77 Undergraduate Calendar.

Engineering Core

EMAT C212† Calculus and Differential Equations
EMAT C232† Matrices and Advanced Calculus
EMAT C271† Applied Probability and Statistics
ENGR C211† Engineering Graphics
ENGR C242† Engineering Mechanics I
ENGR C243† Engineering Mechanics II
ENGR C251† Thermodynamics I
ENGR C273† Basic Circuit Analysis
ENGR C401 Engineering Economy and Practice
ENGR C410* Technical Report

Two courses chosen from the "Social Aspects of Engineering" group:

ENGR C481 Engineers and Society I
ENGR C482 Engineers and Society II
ENGR C483 The Impact of Science and Technology in Society I
ENGR C484 The Impact of Science and Technology in Society II
ENGR C485 Introduction to Technology and Human Affairs I
ENGR C486 Introduction to Technology and Human Affairs II

†*Offered in both Day and Evening Divisions*
**To be submitted at the beginning of the academic year in which the student expects to graduate*

Students admitted to the programme without previous credit for the CEGEP course Data Processing 901 or 911 or its equivalent must complete COMP S211 or its equivalent before entering their second year of study in the BEng programme.

71.3.5 GRADUATION REQUIREMENTS

Students must complete the programme in acceptable standing.

71.3.6 FIRST YEAR PROGRAMMES

Civil Engineering

Six-term sequence	Eight-term sequence
EMAT C212	**EMAT C212**
EMAT C232	**EMAT C232**
EMAT C271	**EMAT C271**
ENGR C211	**ENGR C211**
ENGR C221	**ENGR C221**
ENGR C242	**ENGR C242**
ENGR C243	**ENGR C244**
ENGR C244	**ENGR C251**
ENGR C251	**ENGR C273**
ENGR C273	

Electrical Engineering

Six-term sequence	Eight-term sequence
EMAT C212	**EMAT C212**
EMAT C232	**EMAT C232**
EMAT C252	**EMAT C252**
EMAT C271	**EMAT C271**
ENGR C211	**ENGR C211 or C251**
ENGR C242	**ENGR C242**
ENGR C243	**ENGR C273**
ENGR C251	**ENGR C274**
ENGR C273	**ELEC C251**
ENGR C274	
ELEC C251	

Mechanical Engineering

Six-term sequence	Eight-term sequence
EMAT C212	**EMAT C212**
EMAT C232	**EMAT C232**
EMAT C271	**EMAT C271**
ENGR C211	**ENGR C211**
ENGR C221	**ENGR C242**
ENGR C242	**ENGR C243**
ENGR C243	**ENGR C251**
ENGR C244	**ENGR C273**
ENGR C251	**ENGR C274**
ENGR C273	
ENGR C274	

71.4 Department of Civil Engineering

Professor of Engineering and Chairman of the Department
PAUL P. FAZIO

Professors
GEORGE W. JOLY
CEDRIC MARSH
A. S. RAMAMURTHY
M. S. TROITSKY
Z. A. ZIELINSKI

Associate Professors
MATTHEW McC. DOUGLASS
CARL GOLDMAN
JULIUS KRANTZBERG
OSCAR PEKAU

Assistant Professors
H. K. HA
MARK A. LANG
M. S. NASSER
ALAN D. RUSSELL

Adjunct Professors
PAUL D. BECKER
PETER M. BLAIKIE
WILLIAM W. DAWSON
NEIL HUTCHEON

Adjunct Assistant Professor
A. KHALIL

Lecturers
SAMIR MATTAR
R. A. MOHSINI
MAL TURAGA

DEPARTMENT OF CIVIL ENGINEERING

Civil Engineering is primarily concerned with the creation of the complex systems of construction facilities for sound economic growth of the community. In a broad sense, civil engineers learn to control and modify the environment effectively so as to satisfy the needs and desires of society. Their responsibility for design ranges from foundations and superstructures of our common structures such as buildings, bridges, dams, tunnels, wharves, etc., to many unusual structures such as rocket installations, containment vessels for nuclear reactors, supports for radio telescopes, frameworks for aircraft. In addition, civil engineers are concerned with the engineering aspects of water resources, rivers, harbours, irrigation and drainage; with the disposal of wastes and the control of the quality of air and water; with highways, railroads, airports and other transportation facilities; with measuring, mapping and interpreting the physical conditions of the surface of the earth; and with planning metropolitan areas and constructing and managing their public facilities.

The programme is designed so that students may, after having obtained grounding in the fundamentals of Civil Engineering, specialize in one of five options.

Departmental Requirements

The award of the BEng degree in the Department of Civil Engineering requires completion of the Engineering core, § 71.3.4, the Civil Engineering core shown below, one of five elective option cores, and a minimum of 6.00 further elective units. Students must also satisfy the General Requirements, § 71.3. Students admitted for January 1976 or earlier should consult § 71.4.1 of the 1975/76 Undergraduate Calendar.

Civil Engineering Core

EMAT C311	Transform Calculus and Partial Differential Equations
EMAT C391	Numerical Methods in Engineering Systems
ENGR C221†	Materials Science
ENGR C244†	Mechanics of Materials I
ENGR C341	Mechanics of Materials II
ENGR C361	Fluid Mechanics I
ENGR C362	Fluid Mechanics II
CIVI C321	Engineering Materials
CIVI C331	Geology
CIVI C341	Civil Engineering Systems
CIVI C353	Structural Analysis
CIVI C354	Structural Design
CIVI C371*	Surveying
CIVI C372	Transportation Engineering
CIVI C381	Water Resources Engineering
CIVI C431	Soil Mechanics
CIVI C481	Water Supply Systems
CIVI C482	Urban Sanitation
CIVI C491	Construction Engineering

† *Offered in both Day and Evening Divisions*
**Summer school to be taken before entering second year of study in the BEng programme.*

Technical Electives

Technical electives in the Department of Civil Engineering are offered in five broad interrelated areas. Students must complete one of the option cores listed below, and a minimum of 6.00 further elective units, chosen outside the option core.

1. *Structural Engineering (S)*
2. *Water Resources Engineering (W)*
3. *Transportation Engineering (T)*

4. Construction (C)
5. Foundations (F)

	Elective Units	Option
ACCOUNTING C213 Financial I	3.00	C
CIVI C411* Building Enclosure Design	3.00	C
CIVI C412 Construction Methods and Equipment Management	3.00	C
CIVI C434 Advanced Soil Mechanics	3.00	F
CIVI C435 Foundation Design	3.75	F
CIVI C452 Matrix Analysis of Structures	3.00	X**
CIVI C453 Advanced Reinforced Concrete Design	3.00	S
CIVI C454 Advanced Steel Structures	3.00	S
CIVI C455 Advanced Structural Analysis	4.00	S
CIVI C456 Experimental Stress Analysis	3.50	T
CIVI C471 Highway Design	3.00	T
CIVI C472 Traffic Engineering	3.00	T
CIVI C473 Urban Planning	3.50	W
CIVI C483 Hydrology	3.50	W
CIVI C484 Hydraulic Engineering	3.00	W,F
CIVI C485 Hydraulic Structures		

** Students in the Construction option may, with the approval of the Department, substitute an approved course in the Faculty of Commerce and Administration for this course.*

*** acceptable as elective course for all options.*

71.5 Department of Electrical Engineering

Professor of Engineering and Chairman of the Department
M. N. S. SWAMY

Professors
ANDREAS ANTONIOU
B. B. BHATTACHARYYA
J. CLAIR CALLAGHAN
STANLEY J. KUBINA
BELA A. LOMBOS
V. RAMACHANDRAN

Associate Professors
K. FEHER
J. CHARLES GIGUERE
SERGE A. GRACOVETSKY
JAMES F. LINDSAY
V. PANUSKA
M. VIDYASAGAR

Assistant Professors
V. K. BHARGAVA
EDWARD CERNY
W. HWANG
OTTO SCHWELB
V. STEFANOVIC

Adjunct Assistant Professors
J. J. BELLETRUTTI
I. KAUFMAN
W. B. MIKHAEL
P. K. SEN

Lecturer
CHRISTOPHER TRUEMAN

Research Associates
S. K. DAS
P. KARIVARADARAJAN
C. H. REDDY
G. S. TAKHAR

DEPARTMENT OF ELECTRICAL ENGINEERING

Electrical Engineering is concerned primarily with energy and information: their conversion, transformation and transmission in the most efficient, convenient and reliable manner.

Electric motors and illumination are two aspects of electrical engineering which are easily recognized. The electrical engineer is involved not only in their design, manufacture and application, but also in the original conversion from mechanical, thermal, solar, wind or nuclear energy to electrical form and its transmission to the place where it is required. Another important aspect of electrical engineering is in the field of information processing and transmission, for example: telegraph, telephone, radio, television, radar and computers. The activities of electrical engineers therefore may range from the generation and distribution of massive amounts of power, through information systems, computer science to various interdisciplinary fields such as biomedical engineering. Electrical engineers through their various functions, therefore, exert a profound influence in the cultural, social and economical life of a modern society. The Electrical Engineering programme emphasizes the breadth of the field through a course giving a unified treatment of several kinds of physical systems.

Departmental Requirements

The award of the BEng degree in the Department of Electrical Engineering requires completion of the Engineering Core § 71.3.4, the Electrical Engineering Core shown below, and one of four elective option cores. Students must also meet the General Requirements, § 71.3.

Students admitted for January 1976 or earlier should consult § 71.5 of the 1975/76 Undergraduate Calendar.

Electrical Engineering Core

EMAT C252† Complex Variables
EMAT C312 Laplace Transforms and Advanced Differential Equations
EMAT C391 Numerical Methods in Engineering Systems
ENGR C274 Physical Systems and Measurements
ENGR C372 Fundamentals of Control Systems
ELEC C251† Fundamentals of Electrical Engineering
ELEC C311 Electronics I
ELEC C312 Electronics II
ELEC C321 Electrical Properties of Solids
ELEC C331 Electromechanics
ELEC C341 Linear Network Analysis
ELEC C351 Electromagnetic Field Theory
ELEC C401 Electrical Engineering Seminar
ELEC C413 Design of Logic and Switching Circuits I
ELEC C461 Communication Circuits and Systems

† *Offered in both Day and Evening Divisions*

Technical Electives

Departmental requirements include the completion of one of four options:

(1) Electronics/Communications Option

Students must complete a minimum of 29.25 units from:

	Units
ELEC C411 Pulse Circuits	4.50
ELEC C414 Design of Logic and Switching Circuits II	3.75
ELEC C415 Electronics III	3.75
ELEC C421 Semiconductor Physics	3.75
ELEC C422 Semiconductor Devices Design	4.50
ELEC C441 Modern Filter Design	3.75
ELEC C442 Digital Filters	3.00
ELEC C453 Microwave Engineering I	3.75
ELEC C454 Microwave Engineering II	3.75
ELEC C462 Statistical and Digital Communications	3.75
ELEC C481 Electrical Engineering Project	4.00
ELEC C482 Topics in Electrical Engineering	3.00

(2) Computer Engineering Option

Students must complete:

	Units
ENGR C411 Computer Organization and Software	3.75
ENGR C474 Digital Computers in Systems	3.75
ELEC C316 Fundamentals of Discrete Structures	2.00
ELEC C411 Pulse Circuits	4.50
ELEC C414 Design of Logic and Switching Circuits II	3.75
ELEC C416 Design of Digital Computers	3.00
COMP S241 Computer Languages and Programming	3.00

Students must also choose a minimum of 6.00 units from:

ENGR C471 Time Domain Analysis and Design	4.00
ENGR C472 Studies in System Optimization	4.50
ELEC C442 Digital Filters	3.00
ELEC C462 Statistical and Digital Communications	3.75
ELEC C481 Electrical Engineering Project	4.00
ELEC C482 Topics in Electrical Engineering	3.00

(3) Power Option

Students must complete:

	Units
ELEC C333 Electric Machines	3.75
ELEC C431 Electrical Power Engineering	3.75
ELEC C433 Thyristor Power Applications	3.75

Students must also choose a minimum of 18.25 units from:

	Units
ENGR C411 Computer Organization and Software	3.75
ENGR C412 Operations Research	3.00
ENGR C471 Time Domain Analysis and Design	4.00
ENGR C472 Studies in System Optimization	4.50
ENGR C473 Control System Design	3.75
ENGR C474 Digital Computers in Systems	3.75
ELEC C411 Pulse Circuits	4.50
ELEC C481 Electrical Engineering Project	4.00
ELEC C482 Topics in Electrical Engineering	3.00

(4) Systems Option

Students must complete:

	Units
ENGR C411 Computer Organization and Software	3.75
ENGR C471 Time Domain Analysis and Design	4.00
ENGR C472 Studies in System Optimization	4.50
ENGR C473 Control System Design	3.75

Students must also choose a minimum of 12.75 units from:

	Units
ENGR C412 Operations Research	3.00
ENGR C474 Digital Computers in Systems	3.75
ELEC C431 Electrical Power Engineering	3.75
ELEC C441 Modern Filter Design	3.75
ELEC C442 Digital Filters	3.00
ELEC C462 Statistical and Digital Communications	3.75
ELEC C481 Electrical Engineering Project	4.00
ELEC C482 Topics in Electrical Engineering	3.00

71.6 Department of Mechanical Engineering

Professor of Engineering and Chairman of the Department
T. S. SANKAR

Professors
M. P. duPLESSIS
C. KWOK
M. O. M. OSMAN

Associate Professors
R. CHENG
F. D. HAMBLIN
S. KATZ
K. KRAKOW
D. LILLEY
S. LIN
G. XISTRIS

Assistant Professors
W. G. HABASHI
R. NEEMEH
A. J. SABER
S. SANKAR
J. SVOBODA

Adjunct Assistant Professor
Y. C. DESJARDINS

Research Associates
M. B. BAHGAT
P. DOUTRE
P. M. LEE
S. TSANG
G. WARNER

DEPARTMENT OF MECHANICAL ENGINEERING

As in all branches of professional engineering, mechanical engineers are concerned with the creation of devices, systems, structures and processes for human use. Their task is to apply scientific, mathematical, economic and social knowledge to satisfy specific needs. The services required of mechanical engineers encompass a very wide range of professional activity, such as design, research, development and management carried out in environments of equally diverse nature, such as industry, medicine, private practice, university and government.

Representative fields of endeavour for mechanical engineers include all forms of power generating equipment (steam, internal combustion, nuclear, jet rocket, fuel cells), the design of mechanisms and machines, controls and automation, vibration analysis, environmental control (heating, ventilation and refrigeration), materials handling and precision measurement.

Any of the specific fields may involve the design, construction and control of machines and equipment as well as the research and development of new processes, materials and techniques.

In view of the very wide range of activities in the field, the mechanical engineering curriculum consists of a combination of core courses with a series of technical electives. Strong emphasis is given to building on the principles presented in the basic engineering science and physical systems courses of the General Requirements. Futher core courses are taken by all mechanical engineering undergraduates and deal with topics basic to the field, including control theory, thermodynamics, fluid mechanics, heat transfer, machine design and metallurgy. Technical electives allow students to obtain some specialization in a particular area of the field, depending on their interests and expected future professional activity. Three general areas of specialization are available, namely conventional mechanical engineering which emphasizes thermal fluid power (Option A), design and production engineering (Option B), and electro-mechanical systems, including control systems (Option C).

Departmental Requirements

The award of the BEng degree in the Department of Mechanical Engineering requires completion of the Engineering core, § 71.3.4, the Mechanical Engineering core shown below, one of three option cores, and a minimum of 12.00 further elective units. Students must also satisfy the General Requirements, § 71.3.

Students admitted for January 1976 or earlier should consult § 71.6.1 of the 1975/76 Undergraduate Calendar.

Mechanical Engineering Core

EMAT C252 Complex Variables
EMAT C311 Transform Calculus and Partial Differential Equations
ENGR C221 Materials Science
ENGR C244 Mechanics of Materials I
ENGR C274 Physical Systems and Measurements
ENGR C341 Mechanics of Materials II
ENGR C361 Fluid Mechanics I
ENGR C362 Fluid Mechanics II
ENGR C372 Fundamentals of Control Systems
ELEC C334 Electric Machinery
MECH C311 Mechanical Engineering Laboratory I

MECH C312 Introduction to Engineering Design
MECH C321 Strength and Failure in Metals
MECH C341 Kinematics of Mechanisms
MECH C342 Dynamics of Machines
MECH C351 Thermodynamics II
MECH C352 Heat Transfer I
MECH C373 Measurement Systems
MECH C411 Mechanical Engineering Laboratory II
MECH C441 Mechanical Engineering Design

Technical Electives

Students must complete one option core and a minimum of 12.00 further elective units.

(1) Option A — *Thermal Fluid Power*

	Units
MECH C452 Heat Transfer II	3.75
MECH C461 Gas Dynamics	3.75

(2) Option B — *Design and Production*

MECH C421 Deformation and Mechanical Shaping of Metals	3.75
MECH C445 Machine Design	3.50

(3) Option C — *Systems and Control*

ENGR C473 Control System Design	3.75
MECH C463 Fluid Power Control	3.75

	Preferred for Option	Units
ENGR C411 Computer Organization and Software	B,C	3.00
ENGR C412 Operations Research	B	3.00
ENGR C441 Experimental Stress Analysis	A,B,C	3.50
ENGR C474 Digital Computers in Systems	B,C	3.75
ELEC C311 Electronics I	A,B,C	4.50
MECH C423 Thermal Treatment and Processing of Metals	A,B,C	4.00
MECH C443 Mechanical Vibrations	A,B,C	3.75
MECH C453 Environmental Control	A,B,C	3.00
MECH C455 Introduction to Nuclear Engineering	A,C	3.00
MECH C462 Fluid Machinery	A	3.00
MECH C471 Process Dynamics and Control	C	3.75
MECH C481 Design or Experimental Project	A,C	3.00
MANAGEMENT C345 Production Management	B	3.00

Students may also choose from the following courses, providing these can be accommodated within their timetable:

ENGR C471 Time Domain Analysis and Design	B,C	4.00
ENGR C472 Studies in System Optimization	C	4.50
ELEC C312 Electronics II	C	4.50

71.7 Course Descriptions

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.6.

ENGINEERING MATHEMATICS

ENGINEERING MATHEMATICS C212
Calculus and Differential Equations

Vector functions of one variable, with applications. Introduction to ordinary differential equations. Functions of several variables: differentiation and multiple integrals.
Lectures: 3 hours per week.
Tutorials: 2 hours per week.
Prerequisite: CEGEP Math 203.

ENGINEERING MATHEMATICS C232
Matrices and Advanced Calculus

Matrix algebra, characteristic value problems, diagonalization of Hermitian matrices. Cayly-Hamilton theorem and applications, quadratic forms, vector calculus.
Lectures: 3 hours per week.
Tutorials: 2 hours per week.
Prerequisite: Engineering Mathematics C212 previously or concurrently.

ENGINEERING MATHEMATICS C252
Complex Variables

Algebra of complex numbers in Cartesian and polar forms; functions and inverse functions of complex variables. Derivatives and Cauchy-Riemann, analytic and harmonic functions. Exponential, trigonometric, hyperbolic and logarithmic functions. Complex line integrals, Cauchy-Goursat theorem, Cauchy integral formula. Taylor's and Laurent's series. Residue theorem and applications.
Lectures: 3 hours per week.
Prerequisites: Engineering Mathematics C212; Engineering Mathematics C232; previously or concurrently.

ENGINEERING MATHEMATICS C271
Applied Probability and Statistics

Elementary probability theory. Binomial, normal and Poisson distribution. Sampling and decision theory. Curve fitting. Correlation theory. Applications to the analysis of experimental results. Factorial plans.
Lectures: 3 hours per week.

ENGINEERING MATHEMATICS C311
Transform Calculus and Partial Differential Equations

Elements of complex variables. The Laplace tranform: Laplace transforms and their properties, solution of linear differential equations with constant coefficients. Further theorems and their applications. The Fourier transform: orthogonal functions, expansion of a function in orthogonal functions, the Fourier series, the Fourier integral, the Fourier transform, the convolution theorem. Partial differential equations: physical foundations of partial differential equations, introduction to boundary value problems.
Lectures: 3 hours per week.
Prerequisites: Engineering Mathematics C232.

ENGINEERING MATHEMATICS C312
Laplace Transforms and Advanced Differential Equations

The Laplace transform and its inverse. Laplace transform of periodic functions. Application to solution of linear differential equations with constant coefficients. Introduction to sturm-Liouville problems and orthogonal functions. Generalized Fourier series. Ordinary differential equations with variable coefficients. Power series solutions around ordinary and regular singular points. Special functions. Partial Differential Equations and introduction to boundary value problems.
Lectures: 3 hours per week.
Prerequisites: Engineering Mathematics C232 and C252.

ENGINEERING MATHEMATICS C391
Numerical Methods in Engineering Systems

Methods of numerical solution of mathematical models in engineering. Interpolation. Quadratures for numerical differentiation and integration of tabulated functions. Zeros of polynomials. Systems of linear and non-linear algebraic equations. Numerical solutions of ordinary differential equations using single and multi-step methods. Analysis of round-off and discretization errors. Numerical techniques for the inversion of matrices, and for determining eigenvalues and eigenvectors of matrices, state vectors, transfer vectors and matrices.
Lectures: 3 hours per week.
Prerequisites: Engineering Mathematics C212 and C232.

ENGINEERING MATHEMATICS N-471
Introduction to Stochastic Processes

The concept of a random variable. Distribution and density functions. Functions of one random variable. Two random variables. Functions of two random variables. Properties of the multivariable normal distribution. General concepts of stochastic processes. Correlation and power spectrum of stationary processes.
Lectures: 3 hours per week.
Prerequisites: Engineering Mathematics C232 and C271.
NOTE: This course is no longer offered.

ENGINEERING

ENGINEERING C211
Engineering Graphics

Elements of orthogonal projection, principal and supplementary views, analysis of three-

dimensional spatial relationships of points, lines, planes and solids. Introduction to sectioning conventions, drawing identification by reconstructing technical drawings in free-hand isometric views, and preparation of detail and assembly drawings.
Lectures: 3 hours per week.
Laboratory: 2 hours per week.

ENGINEERING C221
Materials Science

Relationships between properties and internal structure; atomic bonding; molecular, crystalline and amorphous structures; crystal imperfections and mechanisms of structural change; microstructures, plastic deformation and fracture of metals; structures and mechanical properties of ceramics and polymers.
Lectures: 3 hours per week.
Tutorial: 1 hour per week.
Prerequisite: CEGEP Chemistry 202.

ENGINEERING C242
Engineering Mechanics I

Resultant of force systems: equilibrium of particles and rigid bodies; distributed forces; statically determinate systems; cables and trusses; friction; moments of inertia; virtual work. Introduction to stress, strain and bending moment diagrams.
Lectures: 3 hours per week.
Tutorial: 1 hour per week.
Prerequisites: Engineering Mathematics C212 previously or concurrently; CEGEP Physics 101 or 102.
NOTE A/See § 200.6

ENGINEERING C243
Engineering Mechanics II

Kinematics of a particle and rigid body; forces and accelerations; work and energy; impulse and momentum; dynamics of a system of particles and rigid bodies, introduction to vibrations.
Lectures: 3 hours per week.
Tutorial: 1 hour per week.
Prerequisite: Engineering Mathematics C212 previously or concurrently.
NOTE A/See § 200.6

ENGINEERING C244
Mechanics of Materials I

Stress, strain and elasticity; analysis and design of structural and machine elements subjected to axial, torsional, and bending loads; shear and bending moment diagrams; deflections; analysis of statically indeterminate systems; combined stresses; composite beams.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Tutorial: 1 hour per week.
Prerequisites: Engineering C242, Engineering Mathematics C212; Engineering Mathematics C232 previously or concurrently.

ENGINEERING C251
Thermodynamics I

Basic principles of thermodynamics and their application to various systems composed of pure substances and their homogeneous nonreactive mixtures. Simple power production and utilization cycles.
Lectures: 3 hours per week.
Tutorial: 1 hour per week.
Prerequisite: CEGEP Math 103.

ENGINEERING C273
Basic Circuit Analysis

Current, voltage, power and energy; resistance, inductance, and capacitance; sources. Series and parallel circuits. Step response of simple RC, RL and RLC circuits. Sinusoidal steady-state response of R-L-C circuits, power in a.c. circuits. Formulation of equilibrium equations using node-to-datum voltages and using mesh currents. Common network theorems: Superposition, Reciprocity, Thevenin, Norton, Maximum power transfer. Frequency response, resonance. Introduction to polyphase circuits, coupled coils and transformers:
Lectures: 3 hours per week.
Tutorial: 1 hour per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Engineering Mathematics C212 previously or concurrently; CEGEP Physics 201 or 202.
NOTE A/See § 200.6

ENGINEERING C274
Physical Systems and Measurements

Time differentiation, time integration, and singularity functions. Network representation of mechanical, fluid and thermal systems in terms of lumped elements and through and across variables. Generalization of the methods of the basic electrical circuit analysis to the formulation of equilibrium equations and their solution. Application to problems of modelling and measurements in physical systems. Generalized impedance and system functions. Operational block diagrams and analog computer solutions.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Engineering C273
NOTE A/See § 200.6

ENGINEERING C341
Mechanics of Materials II

Dynamic loading, repeated loads, stress concentrations and fatigue, introduction to inelastic action, energy methods, theories of failure, shear centre, unsymmetrical bending, bending of curved bars, introduction to linearized mathematical theory of elasticity, introduction to elastic stability.
Lectures: 3 hours per week.
Tutorial: 1 hour per week.
Prerequisites: Engineering Mathematics C232, Engineering C244

ENGINEERING C361
Fluid Mechanics I

Fluid properties and flow characteristics; fluid statics, basic laws for systems and control volumes, conservation of mass, linear-momentum equations, moment-of-momentum equations, first law of thermodynamics, Bernouli equation, kinematics of flow, dynamics of flow, dimensional analysis and similitude, characteristics of real fluid flow, flow measurement.
Lectures: 3 hours per week.
Tutorial: 1 hour per week.
Prerequisites: Engineering Mathematics C212 and C232, Engineering C251.

ENGINEERING C362
Fluid Mechanics II

Incompressible viscous flow, steady closed conduit flow, fluid resistance and boundary layer effects, differential equations for open channel flow, specific energy, gravity waves hydraulic jump. Fluid machinery. Selected experiments in incompressible flow and in open channel flow.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Engineering C361.

ENGINEERING C372
Fundamentals of Control Systems

General feedback theory; time and frequency domain analysis of feedback control systems; stability criteria; root-locus methods; modelling of d.c. servo; design of simple feedback systems; introduction to statespace methods.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisites: Engineering Mathematics C311 or C312; Engineering C274.

ENGINEERING C401
Engineering Economy & Practice

Different branches of law. Engineering registration. Negligence. Law vs. Ethics. Contracts. Labour organizations and legislation and Workmen's Compensation Act. Organization and financing of business enterprise. Functions of management. CPM and PERT. Economy studies for decision making. Annual cost method. Present worth method. Rate of return method. Multiple alternatives. Depreciation. Income tax.
Lectures: 3 hours per week.

ENGINEERING C410
Technical Report

Each Engineering student must submit a technical report on entering his final year. This report should be from 2,000 to 5,000 words in length, on a topic drawn from the engineering experience of the student during his summer work. If a suitable topic based on personal experience is not available, the student may write on a topic connected with engineering, scientific or industrial work. Any student may consult the chairman of his department concerning the suitability of his proposed topic. If it is judged suitable, the letter of approval must accompany the report.

The report, including an abstract, must be suitably documented and illustrated, must be typewritten on one side only of 8½'' x 11'' white paper of good quality and must be suitably bound. Students are referred to Kate L. Turabian, *A Manual for Writers of Term Papers, Theses and Dissertations,* for matters of style and notation.

The report is to be submitted by the third Monday after Fall classes begin. With the exception of special circumstances approved by the Engineering Undergraduate Studies Committee in individual cases, any acceptable report submitted after this date will receive an "S" grade.

ENGINEERING C411
Computer Organization & Software

Logical basis of computer structure; machine organization and functional units; machine programming including subroutines, linkages, macros and assembly systems; compilers and operating systems.
Lectures: 3 hours per week.
Laboratory: 1½ hours per week.
Prerequisite: CEGEP Data Processing 901 or 911/ or equivalent.

ENGINEERING C412
Operations Research

An introduction to the application of mathematical models to various industrial problems; queuing theory, game theory, linear programming, inventory theory and Monte Carlo processes.
Lectures: 3 hours per week.
Prerequisite: CEGEP Data Processing 901 or 911 or equivalent.

ENGINEERING C471
Time Domain Analysis and Design

State space analysis and design of continuous and discrete systems. Controllability and observability, modal control, pole placement techniques, Luenberger observers, Liapunov stability.
Lectures: 4 hours per week.
Prerequisite: Engineering C372

ENGINEERING C472
Studies in System Optimization

Various techniques of system optimization, such as calculus of variations, Pontryagin's maximum principle, as well as some numerical methods, are studied. These techniques are applied to real systems in fields such as engineering, management and economics.
Lectures: 3 hours per week.
Laboratory: 3 hours per week.
Prerequisite: Engineering C471

ENGINEERING C473
Control System Design

A course in industrial control design procedures by case study, including practical sensing, control, and actuating elements; optimization of system performance by choice of components and compensation; nonlinearities, introduction to multi-loop systems.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Engineering C372.

ENGINEERING C474
Digital Computers in Systems

A study of the application of digital computers to control systems. Topics to be studied include sampled data systems; coding and data transmission; interfaces and analog-digital conversion techniques; simulation of discrete systems.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisites: Engineering C411 or Computer Science S322; Engineering C372.

SOCIAL ASPECTS OF ENGINEERING

ENGINEERING C481
Engineers and Society I

Engineering undertakings have many indirect economic and environmental effects on society. This course traces the parallel developments in ideas and attitudes towards engineering and society.
Lectures: 3 hours per week.
Prerequisite: Completion of 20 courses.

ENGINEERING C482
Engineers and Society II

A continuation of Engineering C481 discussing methods of forecasting technological change and assessing its impact on society.
Lectures: 3 hours per week.
Prerequisite: Completion of 20 courses.

ENGINEERING C483
The Impact of Science and Technology in Society I

Exposition of the profound influences that (1) science has had on the intellectual life of mankind and (2) technological innovations have had on the organization of society. Part I considers the historical aspects, including the industrial revolution, by thoroughly examining certain highlights. Galileo, Descartes and Newton and the subsequent steady advance in technology. Darwin, evolution and evolutionism.

Advances in electricity and magnetism and industrial electrification.
Seminars: 3 hours per week.
Prerequisite: Completion of 20 courses.

ENGINEERING C484
The Impact of Science and Technology in Society II

This course considers the scientific and technological advances of the 20th century, examines the influences and problems of the present and proceeds to formulate criteria for directing technological innovation. Remote sensing, feedback control and automation. Mass production and quality control. Power and natural resources. Pollution, ecology and population density. Communications technology and the understanding of media. The two cultures and the new Ludites. Utopias.
Seminars: 3 hours per week.
Prerequisite: Completion of 20 courses.

ENGINEERING C485
Introduction to Technology and Human Affairs I

An examination of the social and historical context, and an assessment of the future consequences, of certain scientific and technological changes. The reciprocal interactions of certain engineering advances with national, regional and urban economic development, and with social, cultural and pyschological evolution.
Seminars: 3 hours per week.
Prerequisite: completion of 20 courses.

ENGINEERING C486
Introduction to Technology and Human Affairs II

An extension of Introduction to Technology and Human Affairs I in which a different set of scientific and engineering advances are considered.
Seminars: 3 hours per week.
Prerequisite: completion of 20 courses.

CIVIL ENGINEERING

CIVIL ENGINEERING C321
Engineering Materials

Engineering properties of steel and other selected structural metals; heat treatment of steel and aluminium alloys. Properties of woods. Engineering properties and design of concrete. Bituminous materials. Ceramics. Design characteristics and significance of test results of materials used in engineering construction. Introduction to composite materials.
Lectures: 3 hours per week.
Laboratory: 3 hours per week.
Prerequisite: Engineering C221

CIVIL ENGINEERING C331
Geology

Basic principles of physical and structural geology, with emphasis on topics related to Civil Engineering; study of minerals, rocks and soil types, load formation, techniques of air photo interpretations and geological maps.
Lectures: 2 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Engineering C221

CIVIL ENGINEERING C341
Civil Engineering Systems

Development of concepts and techniques commonly associated with systems engineering which are applicable to the design and operation of systems that concern Civil Engineers. Problem formulation, optimization, linear programming, sequencing, routing and scheduling, mathematical expectation, random models and queues. The techniques developed are used to solve problems in Transportation, Water Resources, Structures and Construction Management.
Lectures: 3 hours per week.
Prerequisite: registration in second year in Civil Engineering programme; Engineering Mathematics C271; CEGEP Data Processing 901 or 911 or equivalent

CIVIL ENGINEERING C353
Structural Design

Behaviour and design of steel members: beams, columns, and beam-columns. Riveted, bolted, and welded connections. Behaviour and design of reinforced concrete members. Design of timber members.
Lectures: 3 hours per week.
Laboratory: 2 hours per week.
Prerequisite: Engineering C341 previously or concurrently.
NOTE A/See § 200.6

CIVIL ENGINEERING C354
Structural Analysis

Analysis of statically determinate structures: influence lines, deflections. Analysis of statically indeterminate structures: the method of consistent deformations, the three moment equation, the slope deflection, and the moment distribution methods.
Lectures: 3 hours per week.
Laboratory: 2 hours per week.
Prerequisite: Engineering C341
NOTE A/See § 200.6

CIVIL ENGINEERING C371
Surveying

Elementary operations employed in engineering surveying; use, care and adjustment of instruments; linear and angular measurements; traversing; earthwork calculations; theory of errors; horizontal and vertical curves and curve layout; slope stakes and grades, application of surveying methods to city, and topographic surveying and introduction to advanced surveying techniques; use of digital computers in survey calculations.
Summer school taken before entering second year of study in the BEng programme.
Lectures and Field Work: 8 hours per day; 6 days per week for 3 weeks.

CIVIL ENGINEERING C372
Transportation Engineering

A survey of all transportation modes and introduction to some recent concepts of transportation system planning. Social and economic importance of transportation; essential elements of a transportation system, characteristics of different transportation modes.
Lectures: 3 hours per week.
Prerequisites: registration in second year of the Civil Engineering Programme; Civil Engineering C341.

CIVIL ENGINEERING C381
Water Resources Engineering

Hydrologic data collection and interpretation; precipitation; evaporation; design examples. Open channel hydraulics; design of channels; practical design problems.
Lectures: 3 hours per week.
Laboratory: 3 hours per week.
Prerequisite: Engineering C362, Civil Engineering C331 previously or concurrently; Engineering Mathematics C271.
NOTE A/See § 200.6

CIVIL ENGINEERING C411
Building Enclosure Design

Design aspects of building enclosures affecting the control of air flow, heat flow, sunlight and other forms of radiant energy, rain and snow, water vapour, noise. Consideration of user requirements, economics and codes.
Lectures: 3 hours per week.
Prerequisite: Completion of 20 courses in the Civil Engineering programme.

CIVIL ENGINEERING C412
Construction Methods and Equipment Management

Construction methods, sequences and material handling techniques; impact of safety considerations; work methods studies; equipment policy, selection and replacement analysis.
Lectures: 3 hours per week.
Prerequisite: Civil Engineering C491

CIVIL ENGINEERING C431
Soil Mechanics

Index properties and classification of soils. Weight-volume relationships. Soil structure. Moisture-density relationships. Capillarity. Permeability. Flow nets and seepage. Neutral and effective stresses. Consolidation theory. Shear strength. Stresses in soil due to external loads. Lateral pressures. Soil exploitation. Load tests. Laboratory tests to illustrate lecture topics.
Lectures: 3 hours per week.
Laboratory: 3 hours per week.
Prerequisites: Civil Engineering C321 and C331.

CIVIL ENGINEERING C434
Advanced Soil Mechanics

Selected topics in mechanics of soil media including water flow, rheological behaviour and failure theories. Earth pressure theory. Slope stability.
Lectures: 3 hours per week.
Prerequisite: Civil Engineering C431
NOTE A/See § 200.6

CIVIL ENGINEERING C435
Foundation Design

Loads, bearing capacity and settlement. Lateral pressures. Foundation drainage and waterproofing. Spread footings. Strip footings. Pile foundations. Caissons. Retaining walls. Sheet piling walls, Braced cofferdams. Cellular cofferdams. Anchors.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisites: Civil Engineering C354; C431.
NOTE A/See § 200.6

CIVIL ENGINEERING C451
Advanced Structural Analysis

Analysis of frames, arches and cable structures; influence lines for statically indeterminate structures; plastic analysis; computer applications.
Lectures: 3 hours per week.
Laboratory: 2 hours per week.
Prerequisite: Civil Engineering C354.
NOTE A/See § 200.6

CIVIL ENGINEERING C452
Matrix Analysis of Structures

Classical and matrix methods of structural analysis; influence coefficients, transformation matrices. Matrix formulation of the force and of the displacement methods of analysis. Computer applications.
Lectures: 3 hours per week.
Prerequisites: Engineering Mathematics C311, Civil Engineering C451 previously or concurrently.

CIVIL ENGINEERING C453
Advanced Reinforced Concrete Design

Design of reinforced concrete slabs, frames, prefabricated structures, girders, and shells; prestressed concrete structures.
Lectures: 2 hours per week.
Laboratory: 3 hours per week.
Prerequisite: Civil Engineering C353.

CIVIL ENGINEERING C454
Advanced Steel Structures

Contemporary methods for analyzing and designing steel structures. Codes. Comprehensive design problems from the fields of steel buildings, bridges of various types, and cable structures.
Lectures: 2 hours per week.
Laboratory: 3 hours per week.
Prerequisite: Civil Engineering C451.

CIVIL ENGINEERING C456
Experimental Stress Analysis

A study of modern experimental methods of determining stresses and strains; mechanical, electrical and optical strain gauges; photoelasticity; brittle coatings; model analysis.
Lectures: 2 hours per week.
Laboratory: 3 hours per week.
Prerequisite: Engineering C341

CIVIL ENGINEERING C471
Highway Design

Design controls and criteria including traffic and highway characteristics and capacity. Location and right-of-way. Earthworks. Geometric design of highways and terminals. Pavement design. Highway design project.
Lectures: 2 hours per week.
Laboratory: 3 hours per week.
Prerequisite: Civil Engineering C372

CIVIL ENGINEERING C472
Traffic Engineering

Techniques used in transportation planning: economic base, demographic, land use, and traffic studies, origin-destination surveys. Use of mathematical models. Trip generation and distribution modal split, traffic assignment. Emphasis on use of these techniques for problem solving and interaction with other disciplines: planning, economics, technology.
Lectures: 2 hours per week.
Laboratory: 3 hours per week.
Prerequisite: Civil Engineering C372

CIVIL ENGINEERING C473
Urban Planning

The general planning process. Basic studies: population, economics and land use. Land use planning. Capital improvement programmes and financing. Plan implementation.
Lectures: 3 hours per week.
Prerequisite: Civil Engineering C372.

CIVIL ENGINEERING C481
Water Supply Systems

Water use cycle; capacity of water supply systems; sources of raw water; development of surface water and ground water; water quantities and requirements; design of distribution systems; storage; pumping; water quality; introduction to water purification practices.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Civil Engineering C381.

CIVIL ENGINEERING C482
Urban Sanitation

Sources, characteristics and quantities of waste waters; public health considerations; ur-

ban hydrology and drainage; design of sewers; introduction to wastewater treatment practices; disposal of wastes, stream pollution and control.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Civil Engineering C381

CIVIL ENGINEERING C483
Hydrology
Hydrologic principles; stream flow; floods; ground water. Practical applications.
Lectures: 2 hours per week.
Laboratory: 3 hours per week.
Prerequisite: Civil Engineering C381.

CIVIL ENGINEERING C484
Hydraulic Engineering
Engineering economy and design of water resources systems; reservoir design and operating rules; flood control; navigation; drainage; irrigation; hydro-electric developments. Other selected topics.
Lectures: 2 hours per week.
Laboratory: 3 hours per week.
Prerequisite: Civil Engineering C381.
NOTE A/See § 200.6

CIVIL ENGINEERING C485
Hydraulic Structures
Selection and design of earthfill and concrete dams; spillways; outlet works and other hydraulic structures.
Lectures: 3 hours per week.
Prerequisite: Civil Engineering C381
NOTE A/See § 200.6

CIVIL ENGINEERING C491
Construction Engineering
Study of construction methods, equipment, productivity and safety, project planning, scheduling and control.
Lectures: 3 hours per week.
Prerequisite: Completion of 20 courses in the Civil Engineering programme.

ELECTRICAL ENGINEERING

ELECTRICAL ENGINEERING C251
Fundamentals of Electrical Engineering
Electric charge, Coulomb's Law, electrostatic forces, electric field, Gauss' Law, electric potential, stored energy. Dielectrics, properties of materials in electric fields. Electric current, conduction in a vacuum and in material media, displacement current, magnetic field of a current, force on a current-carrying wire, magnetic induction, electromotive force, energy stored in a magnetic field. Magnetism in material media, magnetic circuits. Time varying fields. Capacitance, resistance, inductance, elements of electric circuits.
Lectures: 3 hours per week.
Tutorial: 1 hour per week.
Prerequisites: CEGEP Physics 201 or 202; Engineering C273 previously or concurrently.

ELECTRICAL ENGINEERING C311
Electronics I
Semiconductor diodes, rectifiers, and waveform-shaping circuits. Zener, varactor and tunnel diodes. Voltage and current amplifiers. Characteristics and operation of junction and MOS field-effect transistors. Biasing techniques. Field-effect transistor amplifiers.
Lectures: 3 hours per week.
Laboratory: 3 hours per week.
Prerequisite: Engineering C273.

ELECTRICAL ENGINEERING C312
Electronics II
Characteristics and operation of bipolar transistors. Biasing techniques and thermal runaway. Small-signal analysis of bipolar transistors. Bipolar transistor amplifiers. Differential and operational amplifiers and their applications. Oscillator circuits.
Lectures: 3 hours per week.
Laboratory: 3 hours per week.
Prerequisite: Electrical Engineering C311

ELECTRICAL ENGINEERING C316
Fundamentals of Discrete Structures
Set algebra; mappings and relations. Algebraic structures: semigroups and groups. Elements of the theory of undirected and directed graphs.
Lectures: 2 hours per week.
Prerequisites: CEGEP Data Processing 901 or 911 or equivalent; Engineering Mathematics C232.

ELECTRICAL ENGINEERING C321
Electrical Properties of Solids
Space lattices, crystal types, reciprocal lattices, dynamics of crystal lattices. Outline of quantum and statistical mechanics. Free electron theory of metals. Electrical and thermal conductivity, galvanometric effects. Thin film technology. Properties of polymers and ceramics.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Electrical Engineering C251

ELECTRICAL ENGINEERING C331
Electromechanics
Energy in singly and doubly excited systems, principles of electromechanical energy conversion. Basic features and models of d.c. machines, 3-phase induction machines, 3-phase synchronous machines. Power transformers.
Lectures: 3 hours per week.
Laboratory: 3 hours per week.
Prerequisites: Electrical Engineering C251; Engineering C274 previously or concurrently.

ELECTRICAL ENGINEERING C333
Electric Machines
Air gap field distribution, windings, harmonic content of induced voltages in rotating machines. Magnetic core calculations. Direct current machines, single-phase and three-phase induction motors, three-phase synchronous motors, selsyns, linear motors.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Electrical Engineering C331.

ELECTRICAL ENGINEERING C334
Electric Machinery
Magnetic fields, circuits and forces; transformers; basic features of rotating machines; models, characteristics and applications of d.c. machines, polyphase synchronous and induction machines.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Engineering C274
NOTE: Students in Electrical Engineering may not take this course for credits.

ELECTRICAL ENGINEERING C341
Linear Network Analysis
The s-plane and system functions. Network Topology and Equilibrium Equations. One and two port networks. Indefinite admittance matrix and Applications. Introduction to Transmission

Lines. Response to Singularity functions. Transient response of Networks and Lines.
Lectures: 3 hours per week.
Prerequisites: Engineering Mathematics C312 previously or concurrently; Engineering C273.

ELECTRICAL ENGINEERING C351
Electromagnetic Field Theory

The field concept. Maxwell's equations. Boundary conditions. Power and energy. The electrostatic field. Electrostatic potential. The concept of capacitance. Conformal mapping in electrostatics. Polarization. The concept of local field in matter. The magnetostatic field. The Biot-Savart law. The scalar magnetic potential. Plane waves. Total internal reflection. The Brewster angle.
Lectures: 3 hours per week.
Tutorial: 3 hours per week, alternate weeks.
Prerequisites: Engineering Mathematics C232 and C252, Electrical Engineering C251.

ELECTRICAL ENGINEERING C401
Electrical Engineering Seminar

Near the end of their programme, students in Electrical Engineering hold meetings with faculty members. These meetings are organized to provide the student with an opportunity to exercise his ability to present and to defend his thoughts on topics of his own choice. Students will be encouraged to devote some of their discussions to such topics as continuing professional education, professional societies, organization of engineering employment, and professional ethics.
Seminars: 2 hours per week.
Prerequisite: Completion of 17 courses.

ELECTRICAL ENGINEERING C411
Pulse Circuits

A continuation of the material of Electrical Engineering C-312; wave-shaping circuits and digital logic circuits.
Lectures: 3 hours per week.
Laboratory: 3 hours per week.
Prerequisites: Engineering Mathematics C312, Electrical Engineering C312.

ELECTRICAL ENGINEERING C413
Design of Logic and Switching Circuits I

Boolean Algebra and its application to electrical switching circuits. Analysis, design and optimization of combinational circuits. Design of transistor gates and their practical limitations. Modern integrated-circuit logic families such as RTL, DTL, TTL, ECL, MOSL, and CMOSL. Applications of combinational circuits to electronic systems and instrumentation.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Electrical Engineering C311.

ELECTRICAL ENGINEERING C414
Design of Logic and Switching Circuits II

Flip-flops and other logic elements for sequential circuits. Characterization, analysis, design and optimization of synchronous and asynchronous sequential circuits. Hazards. Basic memory elements, read-only and random-access memories. Design of counters and registers. Analog-to-digital and digital-to-analog converters. Application of sequential circuits to electronic systems and instrumentation.
Lectures: 3 hours per week.
Prerequisite: Electrical Engineering C413

ELECTRICAL ENGINEERING C415
Electronics III

Frequency response of amplifiers. Linear and non-linear operational amplifier circuits, such as stable-gain differential amplifiers, negative-impedance converters, gyrators, logarithmic amplifiers, precision rectifiers, voltage regulators, etc.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Electrical Engineering C312.

ELECTRICAL ENGINEERING C416
Design of Digital Computers

Computer memories, registers and datapath. Register-transfer-level description of digital systems. Design of control and arithmetic units. Inter-system communication, input/output, design of interfaces. Parallelism in computer systems for increased speed of operation. Special computers such as microprocessors.
Lectures: 3 hours per week.
Prerequisites: Electrical Engineering C414; Engineering C411.

ELECTRICAL ENGINEERING C421
Semiconductor Physics

Electrons in periodic lattices. Intrinsic and extrinsic semiconductors, p-n junctions, diodes and transistors, materials and p-n junction fabrication technology. Measurements of bulk properties.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Electrical Engineering C321

ELECTRICAL ENGINEERING C422
Semiconductor Devices Design

Junction and field effect transistors. Ebers-Moll equations in design form. Tunnel diodes, p-i-n power diodes. Opto-electronic devices, L.E.D.'s. Planar transistor technology and I.C.'s design.
Lectures: 3 hours per week.
Laboratory: 3 hours per week.
Prerequisite: Electrical Engineering C421.

ELECTRICAL ENGINEERING C431
Electrical Power Engineering

Inductance, capacitance, resistance of polyphase transmission lines; current and voltage relations of transmission lines; load flow studies; symmetrical and unsymmetrical faults; power system stability.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Electrical Engineering C331.

ELECTRICAL ENGINEERING C433
Thyristor Power Applications

Circuits and operating principles of phase-controlled converters; external performance characteristics; harmonic content of d.c. output voltage a.c. input current; dual converters; converters as power amplifiers. Application to variable speed drives; d.c. machine dynamics, feedback control.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisites: Engineering C372; Electrical Engineering C311 and C331.

ELECTRICAL ENGINEERING C441
Modern Filter Design

Image parameters, constant-k and m-derived filters. The approximation problem. Design of Butterworth, Tchebyscheff, and Bessel filters as terminated lossless networks. Design of constant-resistance all-pass networks. Design of active-RC filters using operational amplifiers.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Electrical Engineering C341

ELECTRICAL ENGINEERING C442
Digital Filters

Introduction to recursive and non-recursive digital filters; realization methods using the z-transform calculus; amplitude and phase characteristics and relevant approximations and transformations; comparison of digital with conventional filters; application of digital filters.
Lectures: 3 hours per week.
Prerequisite: Electrical Engineering C341

ELECTRICAL ENGINEERING C453
Microwave Engineering I

Plans wave propogation, reflection, refraction. Total reflection, Brewster angle. Reflection and refraction in ionized gates. Coaxial transmission lines, impedance transformation, Smith Chart. Modes in waveguides, cutoff frequency, dispersion, losses. Microstrip and surface waveguides. Circuit theory for waveguiding systems, waveguide discontinuities. Impendance transformation and matching. Binomial and Chebysher transformers. Tapered sections.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisites: Engineering Mathematics C312, Electrical Engineering C341 & C351.

ELECTRICAL ENGINEERING C454
Microwave Engineering II

Electromagnetic resonators, the Fabry-Perot resonator. Periodic structures and filters. Faraday rotation and ferrite devices. Basic antenna theory. Directivity, power gain, beam width. The dipole antenna. Linear arrays. Aperture antennas difraction. Principles of microwave tubes, klystron, magnetron, travelling wave tube.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Electrical Engineering C453

ELECTRICAL ENGINEERING C461
Communication Circuits and Systems

Fourier Series, transforms and integrals. Principles of amplitude, frequency and phase modulation. Modulators, mixers, limiters and demodulators. Representative examples of complete transmission systems. Qualitative treatment of modulation systems in the presence of noise.
Lectures: 4 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisites: Engineering Mathematics C312; Electrical Engineering C312.

ELECTRICAL ENGINEERING C462
Statistical and Digital Communications

Transmission and filtering or random signals, analysis of modulation systems, in particular Pulse Code Modulation, Phase Shift Keying, Frequency Shift Keying, etc., and introduction to noise analysis, information theory and coding.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisites: Engineering Mathematics C271; Electrical Engineering C461.

ELECTRICAL ENGINEERING C481
Electrical Engineering Project

The Electrical Engineering project provides an opportunity for each student to carry out a small design project associated with one or more of the specialist elective courses, under the supervision of a faculty member. The nature of the project selected should be such as to require independent study of current technical literature. When feasible the designs will be assessed in the laboratory. Each student is to present a complete report at the end of the project.
Equivalent laboratory time: 6 hours per week.
Prerequisite: Registration in final year.

ELECTRICAL ENGINEERING C482
Topics in Electrical Engineering

This course may be offered in a given year upon the authorization of the Electrical Engineering Department. The course content may vary from offering to offering and will be chosen to complement the elective courses available in a given option or options.
Lectures: 3 hours per week.
Prerequisite: Permission of the Department.

ELECTRICAL ENGINEERING N-551
Lasers and Masers

Electric dipole transitions. Lifetime and collison broadening. Magnetic dipole transitions. Fundamentals of maser amplification. Rate equations. Microwave solid state masers. Optical resonators and lens waveguides. Doppler broadening. Optical masers (lasers).
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Electrical Engineering C351.
NOTE: This course is no longer offered.

ELECTRICAL ENGINEERING N-552
Microwave Engineering

The dipole antenna. Wave propagation in guides. Impedance transformation and matching. Waveguide couplers. Cavity resonators. Microwave filter design. Ferrite devices. The reflex klystron. The magnetron. The travelling wave tube.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisites: Electrical Engineering C351.
NOTE: This course is no longer offered.

MECHANICAL ENGINEERING

MECHANICAL ENGINEERING C311
Mechanical Engineering Laboratory I

Fundamentals of manufacturing processes and their limitations, topics will include machine shop practice, forming and machining processes, casting processes, plastics, non-conventional machining techniques. Laboratory includes machining simple parts in the machine shop, preparation of shop drawings; field trips to local industries.
Lectures: 2 hours per week.
Laboratory: 3 hours per week.
Prerequisite: Mechanical Engineering C312 previously or concurrently.

MECHANICAL ENGINEERING C312
Introduction to Engineering Design

Introduction to engineering design procedures through the use of open-ended design projects. Lecture topics will include engineering design process, consideration of alternatives, specifications, pencil thinking, principle of design synthesis, dimensioning for manufacture and interchangeability, quality control, presentation of engineering data and calculations; application of computer graphics in design.
Lectures: 2 hours per week.
Laboratory: 2 hours per week.
Prerequisites: Engineering C211; Computer Science C211 or equivalent.

MECHANICAL ENGINEERING C321
Strength and Failure in Metals

The service capabilities of alloys and their relationship to microstructure as produced by thermal and mechanical treatments; strengthen-

ing mechanisms, composite materials. Modes of failure of materials: brittle fracture, fatigue, wear, creep, corrosion, radiation damage.
Lectures: 2 hours per week.
Tutorial: 1 hour per week.
Prerequisite: Engineering C221.

MECHANICAL ENGINEERING C341
Kinematics of Mechanisms

Geometry of motion and mobility criteria; kinematic analysis and synthesis of linkages; theory of spur gears, helical, worm and bevel gearing; gear trains and differentials; cam kinematics.
Lectures: 2 hours per week.
Laboratory: 2 hours per week, alternate weeks.
Tutorial: 2 hours per week, alternate weeks.
Prerequisite: Engineering Mathematics C232.

MECHANICAL ENGINEERING C342
Dynamics of Machines

Kinematic analysis of space mechanisms; static and dynamic analysis of planar mechanisms and gear trains; dynamic analysis of space mechanisms; gyroscopic forces; balancing of rotating and reciprocating machinery.
Lectures: 2 hours per week.
Laboratory: 2 hours per week, alternate weeks.
Tutorial: 2 hours per week, alternate weeks.
Prerequisite: Mechanical Engineering C341.

MECHANICAL ENGINEERING C351
Thermodynamics II

Themodynamic functions and equations, relationships between properties; behaviour of gases and their nonreactive mixtures; combustion. Applications of thermodynamics to power production and utilization systems. *Lectures:* 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Tutorial: 1 hour per week.
Prerequisite: Engineering C251.

MECHANICAL ENGINEERING C352
Heat Transfer I

Steady state and transient heat conduction, numerical methods for two-dimensional steady state heat conduction. Radiation heat exchange between black bodies, between grey bodies and from gases, vapours and flames. *Lectures:* 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Engineering Mathematics C311.

MECHANICAL ENGINEERING C373
Measurement Systems

Unified treatment of measurement of physical quantities. Principle, characteristics, design and calibration of components and systems for measuring position, velocity, acceleration, force pressure, flowrate, temperature, proximity detection, etc. Background knowledge of electronics covering signal generation and processing. Concepts of accuracy and repeatability, linearity, response criteria, bandwidth, input and output impendance, matching of measuring systems, drift and bias.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Engineering C274.

MECHANICAL ENGINEERING C411
Mechanical Engineering Laboratory II

Current design practices are studied by analysis of and experimentation with devices and machines encountered in mechanical engineering.
Laboratory: 3 hours per week.
Tutorial: 1 hour per week.
Prerequisite: Mechanical Engineering C311.

MECHANICAL ENGINEERING C421
Deformation and Mechanical Shaping of Metals

The mechanisms of deformation and softening and the effects of processing variables on the mechanical properties of metals: cold working, annealing and hot working of metals. The effects of mechanical parameters and materials properties on the processing and on the product. Mechanical forming: shear line theory, extruding, forging, rolling, drawing. Metal cutting: machineability, metrology. Powder technology. Shaping of plastics; extrusion, molding, vacuum; forming, lamination.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Engineering C221.

MECHANICAL ENGINEERING C423
Thermal Treatment and Processing of Metals

Science and technology of thermal treatments for controlling the internal structure and the external shape of metals. Equilibrium phase diagrams. Kinetics of phase transformations, diffusion. Thermomechanical treatments of steel. Precipitation hardening. Solidification. Casting. Welding. Non-destructive testing. Finishing processes.
Lectures: 3 hours per week.
Laboratory: 2 hours per week.
Tutorial: 1 hour per week.
Prerequisite: Engineering C221.

MECHANICAL ENGINEERING C441
Mechanical Engineering Design

Concepts in design; failure of mechanical elements under dynamic loading; shafting; bolted and welded joints; anti-friction and journal bearings; design of gears.
Lectures: 2 hours per week.
Laboratory: 2 hours per week.
Prerequisites: Engineering C341; Mechanical Engineering C312 and C342.

MECHANICAL ENGINEERING C443
Mechanical Vibrations

Transient vibrations under impulsive shock, and arbitrary excitation: normal modes, free and forced vibrations. Multi-degree of freedom systems, influence coefficients, orthogonality principle, numerical methods. Continuous systems; longitudinal torsional and flexural free and forced vibrations of prismatic bars. Lagrange's equations. Non-linear vibrations. Vibration measurements.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisites: Engineering Mathematics C311; Engineering C272; Mechanical Engineering C342.

MECHANICAL ENGINEERING C445
Machine Design

Design of springs; design of gear and hydraulic drives, design for hydrodynamic and hydrostatic lubrication; optimum design of mechanical systems, design strategy, value and merit function, maximizing and minimizing procedures. Laboratory work includes an advanced design project representative of those encountered in industry.
Lectures: 2 hours per week.
Laboratory: 3 hours per week.
Prerequisite: Mechanical Engineering C441.

MECHANICAL ENGINEERING C452
Heat Transfer II

Review of momentum transfer, free and forced convection heat transfer, dimensional

analysis as applied to convection heat transfer configurations, heat exchangers, introduction to mass transfer.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Engineering C362; Mechanical Engineering C352.

MECHANICAL ENGINEERING C453
Environmental Control

The effect of air temperature and humidity on physiological comfort, overall heat-transmission coefficients across building sections, heating load calculations, the effect of solar radiation on air-conditioning load, cooling load calculations, heating, air-conditioning and ventilating systems, design of piping and duct arrangement.
Lectures: 3 hours per week.
Prerequisites: Mechanical Engineering C352.

MECHANICAL ENGINEERING C455
Introduction to Nuclear Engineering

Nuclear engineering principles. Nuclear reactions and reactors; control, heat removal and safety. Processing and properties of reactor fuels, moderators and coolants. Types of power reactors; radiation safety and protection.
Lectures: 3 hours per week.
Prerequisites: Mechanical Engineering C351 and C352.

MECHANICAL ENGINEERING C461
Gas Dynamics

Review of one-dimensional, compressible flow. Normal and oblique shock waves; Prandtl-Meyer flow; combined effects in one-dimensional flow; non-ideal gas effects; multi-dimensional flow; linearized flow; method of characteristics. Selected experiments in supersonic flow, convergent-divergent nozzles, hydraulic analogue and Fanno tube.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisites: Engineering C362; Mechanical Engineering C351.

MECHANICAL ENGINEERING C462
Fluid Machinery

Momentum analysis for fluid propulsion, moment-of-momentum and Euler turbine equations, thermodynamics of gas flow, analysis of blades and impellers, performance of incompressible and compressible turbo-machinery.
Lectures: 3 hours per week.
Prerequisites: Engineering C362; Mechanical Engineering C351.

MECHANICAL ENGINEERING C463
Fluid Power Control

Introduction to Fluid Power; pneumatic devices; fluidic devices; hydraulic system components; hydraulic and electro-hydraulic systems; dynamic performance of fluid power systems; fluid logic.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisites: Engineering C362 and C372.

MECHANICAL ENGINEERING C471
Process Dynamics and Control

Dynamics of mechanical and chemical processes: system capacity; resistance; piping complexes; characteristics and dynamics of control valves; process time constants; proportional, reset and derivative control actions; feedforward and cascade control; direct digital control. Case studies on liquid-level control, temperature and heat exchanger control.
Lectures: 3 hours per week.
Laboratory: 3 hours per week, alternate weeks.
Prerequisite: Engineering C473.

MECHANICAL ENGINEERING C481
Design or Experimental Project

A mechanical engineering design, simulation or experimental project appropriate to the senior level carried out under the supervision of a faculty member. A complete report is required at the end of the project.
Equivalent laboratory time: 6 hours per week.
Prerequisite: Registration in final year.

71.8 Department of Computer Science

Professor of Computer Science, and Chairman of the Department
H. S. HEAPS

Professor
K. V. LEUNG

Associate Professors
J. WILLIAM ATWOOD
WOJCIECH M. JAWORSKI
S. L. KLASA
GRAHAM MARTIN
J. MCKAY
C. Y. SUEN

Assistant Professors
V. S. ALAGAR
T. D. BUI
TERRILL FANCOTT
J. JUERGENS
C. W. H. LAM
T. RADHAKRISHNAN

Visiting Assistant Professor
R. YORKE

Lecturer
W. G. PROBST

Post-Doctoral Fellow
J. FISCHER

71.8.1 BACHELOR OF COMPUTER SCIENCE PROGRAMME

The programme leading to the Bachelor of Computer Science degree is offered at the Sir George Williams campus.

Admission Requirements

Applications for admission to the BCompSc programme are submitted to the Admissions Office at the Sir George Williams campus.

General Admission requirements are listed in § 13.

Specific requirements are the CEGEP level courses listed below, or their equivalents.

	CEGEP
Mathematics	101
	103
	105
	203

In addition, the following specific requirements exist for the various Options, and applicants are required to indicate their choice of Option in their application.

(1) The General Science and the Electronics/Systems Options:

	CEGEP
Biology	301
Chemistry	101
	201
Physics	101 or 202
	201 or 202
	301 or 302

(2) The General Business Option:

	CEGEP
Mathematics	205

NOTE: It is highly desirable that students have credit for Data Processing 901, or its equivalent, before undertaking study in any of the three Options. However, applicants not having this credit will be considered, but are strongly advised to obtain it before entering the undergraduate programme, possibly during the summer in which their application is under consideration.

Curriculum for the Degree of Bachelor of Computer Science

The University offers a programme leading to the degree of Bachelor of Computer Science with three Options, namely General Science, Electronics/Systems and General Business. To be recommended for the degree of Bachelor of Computer Science, students must satisfactorily complete an approved programme of 90 credits. In assessing this total, each course of the student's programme offered by the Faculty of Engineering is assigned 3 credits, except Computer Science S491 which is assigned 6 credits. Forty-two of the credits required must be obtained from the core requirements specified below while the remainder must be obtained from courses specified for one of the three Options.

Programmes of Study

Programmes of study are available in both the Day and Evening Divisions as described below.

(1) Day Division

The courses of all Options are offered in the Day Division and students can complete the degree requirements in three years of study by taking the normal load of 30 credits per year.

(2) Evening Division

The courses of the General Science and General Business Options are all offered in the Evening Division, allowing the completion of the degree requirements in that Division.

However, as the Electronics/Systems Option includes courses offered only in the Day Division in the Bachelor of Engineering programme, students must transfer to the Day Division to complete their last two years of study in that Option.
Courses offered in the Evening Division are marked † in the following lists.

Academic Regulations
Students should refer to the sections presenting the Academic Regulations of the University, § 16.

Course Requirements
To be recommended for the degree of Bachelor of Computer Science, students must satisfactorily complete the following core courses as well as those specified below for their chosen Option.

COMP S221† Introduction to Assembly Language Programming
COMP S231† Introduction to Discrete Structures
COMP S241† Computer Languages and Programming
COMP S251† Introduction to Business Programming
COMP S322† Computer Organization
COMP S352† Data and File Structures I
COMP S433† Computer Operating Systems
COMP S453† Data and File Structures II
COMP S491† Computer Science Project

Three credits in Numerical Calculus, such as Computer Science S361†, Mathematics N-311†, or Engineering Mathematics C391. An additional nine credits in Computer Science at or above the 300 level†.

(1) General Science Option
In addition to the core courses shown above, the following courses must be completed satisfactorily.

Mathematics N-241† Introductory Mathematical & Applied Statistics
Mathematics N-261† Advanced Calculus
Mathematics N-281† Linear Algebra I

Electives: An additional three credits in Computer Science at or above the 300 level†.

Twenty-seven credits from the Natural or Social Sciences, Commerce and Administration, or Engineering.

(2) Electronics/Systems Option
In addition to the core courses shown above, the following courses must be completed satisfactorily.

EMAT C212† Calculus and Differential Equations
EMAT C232† Matrices and Advanced Calculus
EMAT C252† Complex Variables
EMAT C271† Applied Probability and Statistics
EMAT C312 Laplace Transforms and Advanced Differential Equations
ENGR C273† Basic Circuit Analysis
ENGR C274† Physical Systems and Measurements
ENGR C372 Fundamentals of Control Systems
ELEC C311 Electronics I
ELEC C312 Electronics II
ELEC C341 Linear Network Analysis
ELEC C411 Pulse Circuits
COMP S325† Logical Design and Switching Theory

Electives: Three courses chosen from the following. (*NOTE: Students who completed Electrical Engineering N-351 prior to September 1976 need only complete two electives.)*

ENGR C471 Time Domain Analysis and Design
ENGR C472 Studies in System Optimization
ENGR C474 Digital Computers in Systems
ELEC C441 Modern Filter Design
ELEC C442 Digital Filters
ELEC C461 Communication Circuits and Systems
ELEC C462 Statistical and Digital Communications
COMP S323† Special Purpose Computer Systems

(3) General Business Option
In addition to the core courses shown above, the following courses must be completed satisfactorily.

ACCO C213† Financial I
ACCO C218† Managerial I
ACCO C414† Information Systems and Control
ECON 209† Introduction to Microeconomics
ECON 210† Introduction to Macroeconomics
FINA C314† Introduction to Finance I
FINA C315† Introduction to Finance II
MANA C213† Foundations of Behaviour
MANA C340† Organizational Behaviour
MARK C213† The Marketing Process (Introductory)
MARK C350† Marketing Management
QUAN C243† Introductory Business Statistics I
QUAN C244† Introductory Business Statistics II
QUAN C313† Managerial Operations Research
QUAN C314† Operations Research and Production Management

Honours Programme
An Honours degree indicates specialization within a field and high academic standing. In order to qualify for an Honours degree a student must meet all the academic qualifications and comply with the regulations set forth below.

NOTE: These regulations are currently under review.

1. A candidate for an honors degree should indicate such intention at registration, and consult the honours representative of the department as soon as possible. His honours standing will be reviewed annually. However, a student who has followed the courses prescribed for the honours programme, and

has met all the requirements, may enter the programme with the approval of the Computer Science Honours Committee at any time before beginning the final 30 credits. No retroactive approval of entry may be granted.
2. An honours student must meet the general degree requirements as well as the specific requirements for an honours degree, and must obtain at least a 'C' average over the total degree programme. Failure in any course will mean suspension from the honours programme. Reinstatement is possible only by recommendation by the honours representative.
3. An honours student must obtain a "B" average with no grade lower than "C−" in all courses in the basic honours programme.
4. A student who enters with advanced standing may apply pro tanto credits, which are applicable to the honours degree requirements, upon approval by the department.
5. A student shall be allowed to qualify for only one honours degree.
6. Honours standing in any programme is granted upon graduation only with the approval of the Senate.
7. Students in the honours programme in Computer Science are required to confirm their standing with the Department by November 15 of each year.

Computer Science Honours Committee
J. W. ATWOOD, *Associate Professor*
P. H. BIRD, *Associate Professor*
S. L. KLASA, *Associate Professor*

Requirements for Honours

The following courses constitute an Honours programme in Computer Science provided the student maintains the required academic standing:

First Year:
COMP S221, S231, S241, S251; MATH N-241, N-261, N-281

Second Year:
COMP S322, S342, S352, S443, S455; MATH N-351, N-372; COMP S361 or MATH N-311

Third Year:
COMP S323, S453, S491; COMP S325 or S433; 3 credits from COMP S445, S456, S471, S475; 6 credits from MATH N-331, N-341, N-342, N-343, N-352, N-434

71.8.2 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.6.

COMPUTER SCIENCE S211
Introduction to Computers and Computing

An introduction to the essential features of computers and computing systems. Problem solving, algorithms, and flowcharts. Detailed specifications of Fortran with numerical applications.
Lectures: 3 hours per week, 1 term.
Laboratory: 1½ hours per week, 1 term.
NOTE A/See § 200.6

COMPUTER SCIENCE S216
Intermediate Scientific Programming

The course will treat some advanced concepts in FORTRAN, introduce a block structured language, and discuss structured programming and scientific applications. There will be discussion of both numerical and non-numerical types of problems such as computation of zeros of functions, systems of equations and curve fitting, the generation of random numbers and their use in operations research, matrix manipulation, determination of maxima and minima, optimization, sort and search, scan and merge.
Lectures: 3 hours per week, 1 term.
Laboratory: 1½ hours per week, 1 term.
Prerequisite: CEGEP Math 203; CEGEP Data Processing 901 or 911 or equivalent.
NOTE: Students who have credit for Computer Science N-310 may not take this course for credit.
NOTE: This course is intended for students in Engineering and Science. Students registered in the BCompSc programme may not take this course for credit.

COMPUTER SCIENCE C221
Introduction to Assembly Language Programming

Computer structure, machine language, instruction execution, addressing techniques and digital representation of data, symbolic coding and assembly systems; macro definition and generation. Programme segmentation and linkage; loading. Systems and utility programmes; programming techniques. Introduction to the facilities provided by operating systems.
Lectures: 3 hours per week, 1 term.
Laboratory: 1½ hours per week, 1 term.
Prerequisite: CEGEP Data Processing 901 or 911, or equivalent.

COMPUTER SCIENCE N-223
Computer Languages

Achievement of proficiency in programming techniques using high-level languages. Definition of various programming languages including procedure-oriented, list processing, and simulation languages. Specification of syntax and semantics. Basic properties of programming language. The goal of precision programming and its attainment through structured programming techniques.
Lectures: 3 hours per week, 1 term.
Laboratory: 1½ hours per week, 1 term.
Prerequisites: CEGEP Data Processing 901 or 911; CEGEP Math 203; Computer Science N-220 or Electrical Engineering N-441 and N-513.
NOTE: This course is no longer offered. See Computer Science S241.

COMPUTER SCIENCE S231
Introduction to Discrete Structures

Introduction to a high level programming language and fundamental algebraic, logical and combinatoric concepts such as: Set algebra; mappings and relations. Algebraic structures; semi-groups and groups. Elements of the theory of directed and undirected graphs. Boolean algebra and propositional logic. Applications of these structures to various areas of computer science.
Lectures: 3 hours per week, 1 term.
Prerequisites: CEGEP Data Processing 901 or 911, or equivalent previously or concurrently.

COMPUTER SCIENCE S241
Computer Languages and Programming

Precision programming by use of structured programming techniques. Definitions and specifications of syntax and semantics of programming languages. Use of high-level languages with examples chosen from discrete structures.
Lecture: 3 hours per week, 1 term.
Laboratory: 1½ hours per week, 1 term.
Prerequisites: CEGEP Data Processing 901 or 911, or equivalent; CEGEP Math 203; Computer Science S231 or Electrical Engineering C316.
NOTE: Students who have credit for Computer Science N-223 may not take this course for credit.

COMPUTER SCIENCE S251
Introduction to Business Programming

Introduction to the data processing field and use of a business oriented language (e.g. COBOL). Concepts of mass storage characteristics. File organization and handling; sorting. Basic business applications.
Lectures: 3 hours per week, 1 term.
Laboratory: 1½ hours per week, 1 term.
Prerequisite: CEGEP Data Processing 901 or 911, or equivalent.
NOTE A See § 200.6

COMPUTER SCIENCE N-310
Intermediate Scientific Programming

Achieving of proficiency in programming techniques using Fortran. Arrays, iteration, subroutines and procedures, numerical and non-numerical data types, storage allocation, character manipulation. Debugging techniques. Use of library programmes. Basic applications in science, e.g. mathematics, statistics.
Lectures: 3 hours per week, 1 term.
Laboratory: 1½ hours per week, 1 term.
Prerequisites: CEGEP Data Processing 901 or 911; CEGEP Math 203, or equivalents.
NOTE: This course is no longer offered. See Computer Science S216.

COMPUTER SCIENCE S322
Computer Organization

Organization, logic design and components of a digital computer. Basic digital circuits. Data representation and transfer. Digital arithmetic. Digital storage and accessing. Control functions. Input-output devices and channels. System organization. Reliability. Description and simulation techniques.
Lectures: 3 hours per week, 1 term.
Prerequisites: Computer Science S221; S216 or S241, or equivalents.

COMPUTER SCIENCE S323
Mini-Computer Systems

Hardware and software structures relating to mini-computers. Processor architecture, input-output architecture, and operating system components. The laboratory provides hands-on access to mini-computer systems using machine and assembly language programming.
Lectures: 3 hours per week, 1 term.
Laboratory: 2 hours per week, 1 term.
Prerequisites: Computer Science S322, or permission of the Department.
NOTE: Students who have credit for Computer Science N-340 may not take this course for credit.

COMPUTER SCIENCE S325
Logical Design and Switching Theory

Review of binary arithmetic and Boolean algebra with specific reference to logic design. Combinational logic design. Asynchronous and synchronous circuit design and analysis. Microprogramming. Introduction to digital systems.
Lectures: 3 hours per week, 1 term.
Laboratory: 2 hours per week, 1 term.
Prerequisites: CEGEP Data Processing 901 or 911, or equivalent, and Computer Science S231, or permission of the Department.
NOTE A See § 200.6

COMPUTER SCIENCE N-340
Special Purpose Computer Systems

Structure and system organization of special purpose computers. Symbolic coding and assembly language, instruction repertoire, addressing modes, programming techniques, systems and utility programming, peripheral devices and interfacing. A small computer system will be used for demonstration and laboratory purposes.
Lectures: 3 hours per week, 1 term.
Laboratory: 1½ hours per week, 1 term.
Prerequisite: Computer Science N-301, or permission of the Department.
NOTE: This course is no longer offered. See Computer Science S323.

COMPUTER SCIENCE S342
Programming Languages and Compiler Theory

Review of assembler and macro instructions. Symbol tables and storage allocation. Problem-oriented languages. List processing and string manipulation languages. Structure of algorithmic languages. Compiler organization; statement identification and decomposition, syntax analysis code generation, run-time routines, error diagnostics, code optimization. Compiler writing languages.
Lectures: 3 hours per week, 1 term.
Prerequisites: Computer Science S221 and S241.

COMPUTER SCIENCE S352
Data and File Structures I

A model of Data Processing System. Basic concepts of data. Trees and linear lists. Hierarchic and associative structures. Storage structures and storage management.
Lectures: 3 hours per week, 1 term.
Prerequisites: Computer Science S221, S241, and S251, or permission of the Department.

COMPUTER SCIENCE S361
Elementary Numerical Methods

Introduction to numerical algorithms fundamental to scientific computer applications. Errors; interpolation; quadrature; linear systems of equations; roots of polynomials and non-linear equations; linear programming and simplex method; transportation problems and network flow. Emphasis on the algorithmic approach; efficiency.
Lectures: 3 hours per week, 1 term.
Laboratory: 1½ hours per week, 1 term.
Prerequisites: CEGEP Math 205 or Mathematics N-281 or Engineering Mathematics C232, or equivalent; Computer Science S216 or S241.

COMPUTER SCIENCE S426
Digital System Design

Specification of digital systems. Types of organization and system timing. MST and LSI components and their use in system design. Microprocessor based systems. Support software and program development. Interfacing.
Lectures: 3 hours per week, 1 term.
Laboratory: 2 hours per week, 1 term.
Prerequisites: Computer Science S322 and S325, or permission of the Department.

COMPUTER SCIENCE S435
Formal Languages and Syntactic Analysis

Definition of formal grammars: arithmetic expressions and precedence grammars; context-free and finite-state grammars. Algorithms for syntactic analysis; recognizers, backtracking and operator precedence techniques. Semantics of grammatical constructs. Simple syntactical compilation. Relationship between formal languages and automata.
Lectures: 3 hours per week, 1 term.
Prerequisites: Computer Science S352

COMPUTER SCIENCE S436
Introduction to the Theory of Automata

Finite state machines, state transition diagrams and tables. Neural networks. Regular expressions, Kleenes theorem. Computability. Turings theorem. Turing machines. Universal machines relationships to the theory of recursive functions.
Lectures: 3 hours per week, 1 term.
Prerequisites: Computer Science S231 and S241

COMPUTER SCIENCE S443
Computer Operating Systems

Software organization. Batch processing systems; translation, loading and execution. Communication between programme units. Parallel input-output processing, buffers, overlapped channels, interrupt facilities and memory protection. Spooling. Multiprogramming and multiprocessing systems. Time-sharing and real-time applications. Addressing techniques, paging, core management; file system design and accounting procedures.
Lectures: 3 hours per week, 1 term.
Prerequisite: Computer Science S241 and S322 or equivalents.

COMPUTER SCIENCE S445
Heuristic Programming

The definition of heuristic vs. algorithmic methods; rational heuristic approach; non-numeric symbolic programming; self-organizing systems; heuristic pro-techniques including a list of the uses of list processing languages; survey of examples from representative application areas including artificial intelligence, and other advanced computer application areas.
Lectures: 3 hours per week, 1 term.
Prerequisite: Computer Science S342

COMPUTER SCIENCE S453
Data and File Structures II

Multilinked structures, techniques of file structuring. File size and access time estimating. Data and file management systems. Searching.
Lectures: 3 hours per week, 1 term.
Prerequisite: Computer Science S352; or permission of the Department.

COMPUTER SCIENCE S455
Principles of Data Processing

Study of techniques to handle data processing applications. Design of business systems. Preparation and handling of data. Interpretation and validity of results. Information retrieval. Introduction to systems analysis.
Lectures: 3 hours per week, 1 term.
Prerequisite: Computer Science S251

COMPUTER SCIENCE S456
Information Retrieval

The basic problems of information retrieval. Document and library data bases. Question logic and processing considerations. Structure of search programmes for batched questions with sequential and inverted files. Practical considerations in system design. Measures of retrieval effectiveness.
Lectures: 3 hours per week, 1 term.
Prerequisite: Computer Science S352 or equivalent.

COMPUTER SCIENCE S465
Analysis of Algorithms

Empirical and theoretical measures of the efficiency of algorithms. A study of good algorithms related to sorting, matrix multiplication, fast Fourier transform, integer and polynomial arithmetic, and graph theory. A survey of hard problems, NP-completeness, and intractable problems.
Lecture: 3 hours per week, 1 term.
Prerequisites: Computer Science S352 and S361, or permission of the Department.

COMPUTER SCIENCE S471
Computer Graphics

Display memory; generation of points, vectors, etc. Interactive versus passive graphics; CRT devices and plotters, Analog storage of images. Digitizing and digital storage. Pattern recognition. Data structures and graphics software. The mathematics of three-dimensional tranformations; projections. Applications in computer-aided design and instruction.
Lectures: 3 hours per week, 1 term.
Laboratory: 1½ hours per week, 1 term.
Prerequisites: Computer Science S352 and S443

COMPUTER SCIENCE S475
Discrete System Simulation

Discrete random variables and their distributions. A comparison of simulation techniques: discrete, continuous and hybrid. Queueing models, analysis of data. Model building. Review of simulation languages. Application to business problems and operations research.
Lectures: 3 hours per week, 1 term.
Prerequisites: Computer Science S241; Mathematics N-241 or Quantitative Methods C244 or Engineering Mathematics C271.

COMPUTER SCIENCE S491
Computer Science Project

A series of seminars presented by students and faculty members, concerning their particular interest. Students will work on a project in conjunction with a faculty member.
Seminar: 1 hour per week, 2 terms.
Project: 2 hours per week, 2 terms.
Prerequisite: Registration in final year of the Bachelor of Computer Science programme, or permission of the Department.

71.9 Certificate Programme in Quality Control

The programme leading to the Certificate in Quality Control is offered at the Loyola campus, in the Evening Division only.

Admission Requirements

Applications for admission to the certificate programme in Quality Control are submitted to the Evening Division Office at the Loyola campus.

General Admission requirements are listed in § 13.

Special requirements are a Diploma of Collegial Studies, or its equivalent, including the CEGEP courses Math 101, 103, 105 and 203, or their equivalents.

Curriculum for the Certificate in Quality Control

To be recommended for the award of the Certificate in Quality Control, students must satisfactorily complete the programme of 48 credits specified below. Of the total credits required, 36 pertain directly to quality control, while the remainder are from computer science, mathematics and other allied areas. The courses offered in the programme will provide the student with an in-depth understanding and working knowledge of the principles and practices used in the rapidly expanding field of quality control.

The programme is fully endorsed by the Montreal Section of the American Society for Quality Control (ASQC). It has been designed in keeping with the requirements stipulated by the Education Institute of the ASQC headquarters and, as such, does much to prepare candidates for the ASQC Quality Engineer Certificate examinations.

Academic Regulations

Students are subject to the academic regulations of the Evening Division at the Loyola campus.

Course Requirements

To be recommended for the award of the Certificate, students must satisfactorily complete the following courses:

QUAL C C200 Elementary Metrology
QUAL C C201 Advanced Metrology
QUAL C C202 Statistical Quality Control
QUAL C C203 Statistical Sampling
QUAL C C204 Basic Concepts of Reliability
QUAL C C205 Reliability Engineering
QUAL C C206 Quality Management
QUAL C C207 Design of Experiments
QUAL C C208 Quality Assurance Technology
COMPScL221 Introduction to Business Programming
COMPScL241 Elementary Fortran Programming
COMPScL424 Computer Applications of Statistics

Course descriptions for courses offered in the Faculty of Engineering, designated C above, are given below. The Computer Science courses, designated L, are described under the Loyola Faculty of Arts and Science, § 51.

COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.6.

QUALITY CONTROL C200
Elementary Metrology

An introductory course dealing with general measurement concepts, methods for estimating accuracy and precision, and systematic and constant errors.

Included are: mathematical concepts in metrology, statistical analysis of measurement data, the role of standards, legal bases, systems of measurement, master standards, principles involved in the use of projectors, pneumatic comparators, and direct reading measuring machines. (3 credits)

QUALITY CONTROL C201
Advanced Metrology

This course applies the principles presented in Elementary Metrology, and explores the value of these principles through everyday applications to modern technology.

Special consideration is given to the "Système Internationale" (Modernized Metric System) and its influence on the immediate future of industry, including the use of conversion tables and formulae.

The course expands on non-destructive testing techniques, including, in some depth, radiographic, ultrasonic and nucleonic gauging and measurement applications. (3 credits)
Prerequisite: Quality Control C200.

QUALITY CONTROL C202
Statistical Quality Control

Effective theory and practice for maintaining process control of manufactured products. A workshop course with full student participation in solving a variety of practical quality control problems.

Discussed are the concept of variation, frequency distributions, functions of a distribu-

tion, the various types of control charts including those for attributes and variables data, analysis of patterns, process capability studies and other related topics. (3 credits)

QUALITY CONTROL C203
Statistical Sampling

The principles of sampling the manufactured product, and the risks involved for both producer and consumer, are presented in lecture/workshop sessions.

Discussed are probability theory, the binomial, Poisson and hyper-geometric distributions; their development and application to sampling theory. Also included are three classifications of sampling plans, AQL, AOQL, and LTPD, and the various types of sampling plans within each classification, such as single, double, multiple, unit sequential, and continuous plans and their associated operating characteristic curves. Mil-Std-105D and Mil-Std-414 are discussed in detail and the Dodge and Romig tables are highlighted. (6 credits)
Prerequisite: Quality Control C202

QUALITY CONTROL C204
Basic Concepts of Reliability

A mixed format of lectures, workshops, problems and discussions designed to familiarize the student with the basic principles of reliability. Building gradually from historical review, definitions and concepts, the course discusses probability theory, Poisson and exponential distributions, reliability equation, MTBF and failure rate concepts, Weibull analysis, mean and median ranks, confidence statements, life characteristic curves, system reliabilities, standby systems, associated problems and other related topics. (3 credits)
Prerequisite: Quality Control C202.

QUALITY CONTROL C205
Reliability Engineering

Statistical methods in life testing. Introduction, reliability, concepts and definitions, historical review and development. Life characteristic curve, Poisson and exponential distributions, exponential reliability equation, MTBF and failure rate concepts.

Chi square confidence statements and intervals, Weibull analysis, mean and median ranks, associated problems. Probability theory, system reliabilities, standby systems, and other related topics. (3 credits)
Prerequisite: Quality Control C201

QUALITY CONTROL C206
Quality Management

Emphasis is on general principles of planning and managing rather than quality control methodology. The concept of total quality control, from design, development and manufacture to purchase and customer use, is developed.

The economics of quality, the planning and implementation of a quality cost programme, organization for quality, procurement quality control, in-process control, motivation for quality, inspection and test planning as well as the planning of the product, system quality audit and customer feedback are topics treated in detail. (3 credits)

QUALITY CONTROL C207
Design of Experiments

An introductory course, providing a more scientific approach to experimentation with emphasis on the use of statistical designs for data interpretation and high confidence in the results and overall costs.

Topics covered are: tests of hypothesis, F, T, X_2, analysis of variance, Latin square, cube and nested designs. Full factorial and fractional factorial designs. Goodness to fit tests, tests for proportion, for precision and accuracy, normal probability paper, control chart analysis of experiments, regression analysis and other relevant statistical tools and designs such as random balance, multiple balance. (6 credits)
Prerequisite: Quality Control C202.

QUALITY CONTROL C208
Quality Assurance Technology

The basic principles of quality assurance, and its definition as a planned and systematic pattern of actions necessary to provide adequate confidence that a product or service conforms to established requirements. The development of the individual quality system in a modular format to cover the various phases of the industrial and commercial enterprise. Major subjects treated in detail: development of Quality Organizations, systems engineering, closed loop feedback systems, principle of modular systems, what the customer expects versus what he gets, product development, vendor-vendee, manufacturing, processing, servicing, post production and marketing. (6 credits)
NOTE A See § 200.6

81 Faculty of Fine Arts

Table of Contents

81.1 FACULTY OF FINE ARTS

81.2 ADMISSION REQUIREMENTS

81.3 DEGREE REQUIREMENTS

81.3.1 BFA Degree Requirements
81.3.2 Residency Requirements
81.3.3 BFA Honours Programme Requirements
81.3.4 Honours Committee
81.3.5 Diploma in Art Education

DIVISION OF VISUAL ARTS

81.4 PROGRAMMES IN STUDIO ARTS

81.5 STUDIO ART I

81.6 STUDIO ART II

81.7 ART EDUCATION

81.8 ART HISTORY

81.9 CINEMA

DIVISION OF PERFORMING ARTS

81.10 THEATRE ARTS

81.11 MUSIC

81.1 Faculty of Fine Arts

Dean
ALFRED PINSKY

Associate Dean
EDWY F. COOKE

Assistant Dean
GERALD GROSS

Assistant to the Dean
(Student Programmes)
E. ANNE ADAMS

81.2 Admission Requirements

General admission requirements are listed in § 13. Specific requirements for admission to the major programmes in Studio Art are as follows:

Art History and Studio Art Art Education Graphic Design Studio Art	Two full studio courses, one full Art History course and one additional full course selected from Art History, Cinema, Music or Theatre.

A student without the necessary studio courses must take Art C200 as a prerequisite to other studio courses in the Visual Arts.

NOTE: Quebec universities have agreed to admit to the appropriate undergraduate programmes any collegial student successfully completing the above programme provided, of course, that resources are sufficient. When all such qualified students have been admitted, the University reserves the right to admit students who may not have all the specific prerequisites according to its own criteria.

The number of students accepted into the BFA programmes will depend upon the space available. Applicants for all Studio Art Programmes, who have a limited background, will be required to submit a portfolio and/or slides of work to the Portfolio Committee, Division of Visual Arts, for placement recommendation. Concordia students wishing to transfer into the Fine Arts Faculty should fill out the necessary faculty transfer forms available from the Admissions Office on the Sir George Williams Campus or should complete a Faculty of Fine Arts Student Request form on the Loyola Campus.

81.2.1 TRANSFER STUDENTS

Students who have already completed courses in other colleges or universities who wish to apply for advanced standing will be granted credits on the basis of the programme at Concordia University. Applicants for all Studio Art programmes will be required to submit a portfolio and/or slides of work to the Portfolio Committee, Division of Visual Arts, for placement recommendation. *This must be done prior to registration.* Students seeking a second degree must complete a minimum of 60 credits at Concordia University, while students transferring credits towards a first degree must complete a minimum of 45 credits at Concordia.

81.2.2 PORTFOLIO COMMITTEE

Any student wishing to enter a Studio Art course from a background other than CEGEP Fine Arts programme must submit a portfolio of his work to the Portfolio Committee, Division of Visual Arts prior to registration for exemption from Art C200. This portfolio evaluation will help to determine where the applicant will be placed.

81.3 Degree Requirements

Students preparing for the degree of Bachelor of Fine Arts will take a minimum of 90 credits. Each credit represents, for the average student, a minimum of 45 hours of work spread across lectures, conferences, laboratories, studio or practice-periods, tests, examinations and personal work.

81.3.1 BFA DEGREE REQUIREMENTS

Graduation with the degree of Bachelor of Fine Arts requires:

1. Successful completion of a Specialization, Major programme or Double Minor.

Students must successfully complete at least 24 of the 90 credits outside their area of concentration. These 24 credits shall be

selected according to the following requirements:

a) 18 credits shall be outside the Faculty of Fine Arts

b) 6 credits shall be outside their area of concentration, but may be within the Faculty of Fine Arts.

Concentration Requirement

The Concentration Requirement can be satisfied either by a Major programme (60 credits) or by a Double Minor (2 × 30 credits). The selection is to be made upon entry, prior to registration.

The requirement of selecting a Major programme upon entry should not be thought of as being necessarily a final commitment. The Fine Arts programme is designed to be flexible enough to allow for changes of orientation, subject, of course, to limitations in the case of certain programmes in great demand.

A "Minor" is made up of an approved sequence of 30 credits. The term "Double Minor" states that the student has followed, within the requirements for the BFA degree, a planned programme of study in two specialized fields, with a lower degree of concentration in either than is afforded by a Major Programme. A student may select any two of the Minors to form a "Double Minor".

81.3.2 RESIDENCY REQUIREMENTS

To fulfill the residency requirements for a BFA degree with a Major in Art Education, Graphic Design or Studio Art, at least 30 of the credits in Studio Art and 6 of the credits in Art History must be taken at Concordia. Ordinarily this, combined with the other Degree Requirements § 81.3, will imply that the full-time student must enrol for two years of study at Concordia University.

Programme Advisers

Student Programme Adviser
A. ADAMS, *Asst. to the Dean*

Art Education
F. BARRY
H. SHUMWAY

Art History
D. ANDRUS
S. PAIKOWSKY, *Honours Adviser*

Art History and Studio Art
M. DEWES, *Studio Art*
E. JAMES, *Art History*

Cinema
A. HERMAN
T. WAUGH

Drama
W. REZNICEK

Drama in Education
B. MACKAY

Fine Arts
See Art History, Cinema, Drama, Music and Studio Art.

Graphic Design
F. MULVEY

Music
A. CROSSMAN

Studio Art
W. KROL
P. LANDSLEY

Theatre Performance
R. ALLISON

Theatre Scenography
W. REZNICEK

81.3.3 BFA HONOURS PROGRAMME REQUIREMENTS

See Academic Regulations § 16.2.4.

81.3.4 HONOURS COMMITTEE

Dean or his delegate
Associate Professor J. KELLY, *Director of Visual Arts*
Assistant Professor R. GREENBERG, *Assistant Director of Visual Arts, Art History*
Assistant Professor G. WALTERS, *Director of Division of Graduate Programmes*

Honours Student Representative

Registrar or his delegate

81.3.5 DIPLOMA IN ART EDUCATION

The Faculty of Fine Arts offers a one year course leading to the Diploma in Art Education.

This course is integrated with the Bachelor of Fine Arts, (Art Education Major) to provide a continuous pattern of studies preparing art specialists for teaching in elementary and secondary schools.

In order to qualify for admission students must have completed the Concordia University Bachelor of Fine Arts, (Art Education Major) or the equivalent. Graduates of other institutions will be considered if they have had the equivalent of an undergraduate major in studio work and can present an acceptable portfolio. They will be expected to make up the Education and Art Education courses included in the Bachelor of Fine Arts, (Art Education Major).

The Diploma Course is offered in the Day Division only. Graduates who have been awarded the Diploma in Art Education meet the requirements for a Specialists Certificate in Art, awarded by the Quebec Board of Education. Detailed course description will be found in the Graduate Studies Calendar.

81.4 Programmes in Studio Arts

Director of the Division of Visual Arts
J. KELLY

Students are responsible for fulfilling their particular degree requirements, hence the following sequence must be read in conjunction with § 81.3

The superscript indicates credit value.

60 BFA Major in Art History and Studio Art

30* Chosen from Art History C240[6], C338[6], C339[6], C342[6], C343[6], C345[6], C441[6], C442[6], C443[6], C444[6], C446[6], C480[6], C490[6]

30 Studio Art Elective credits (6 credits may be from Scenography C200[6], C201[3], C202[3], Cinema C311[6] or 6 credits in Music chosen in consultation with the adviser.)

** Art C460[6] or Art C461[6] may be substituted for 6 credits in Art History.*

60 BFA Major in Fine Arts *

0-24 Music Section: Music Elective credits chosen in consultation with the programme adviser, Music.

0-24 Studio Art Section: Studio Elective credits which may include Art C-460[6].

0-24 Art History Section: chosen from Art History C240[6], C339[6], C342[6], C343[6], C345[6], C443[6], C445[6].

0-24 Cinema Section: chosen from Cinema C211[6], C212[6], C311[6], C312[6], C321[6], C322[6], C426[3], C427[3].

0-24 Theatre Arts Section: chosen from Theatre Performance C201[3], C202[3], C203[3], C204[3], Scenography C200[6], C201[3], C202[3], C300[6], C320[6], Drama in Education C200[6], Theatre C201[3], C300[6], C301[3], C401[3].

** Credits must be taken in a minimum of 3 fields with a maximum of 24 credits in any single field.*

60 BFA Major in Graphic Design

12 Art History Elective credits *

30 Drawing C200[6], Graphic Design C200[6], C250[6], C300[6], C301[3], Photography C201[3]

6 chosen from Graphic Design C400[6], C450[6]

12 Studio Art Elective credits

** Students with exemption for Art History C240 may substitute 6 credits in Studio Art for 6 credits in Art History.*

60 BFA Major in Studio Art

6 Art History Elective credits

6 Lecture/seminar Elective credits in Art or Art History

48 Visual Arts Studio Elective credits (6 credits may be taken in studio courses in Cinema, Music or Theatre Arts selected in consultation with an adviser from Cinema, Music or Theatre Arts)

30 Minor in Art History and Studio Art

12-18 Studio Art Elective credits

12-18 chosen from Art History C240[6], C338[6], C339[6], C342[6], C343[6], C345[6], C441[6], C443[6], C444[6], C445[6], C446[6].

81.5 Studio Art I

(Design, Graphic Design, Photography, Printmaking)

Associate Professor and Assistant Director Visual Arts, Studio I
C. GABRIEL-LACKI

Associate Professors
J. GOGUEN
D. JONES
J. KELLY
F. MULVEY
B. WAINWRIGHT

Assistant Professors
T. GIBSON
I. WHITTOME

81.5.1 COURSE DESCRIPTIONS

PORTFOLIOS: Any student without a CEGEP Diploma in 051.00 Programme who wishes to register for a course in Studio Art must submit a portfolio of their work to the Portfolio Committee of the Division of Visual Arts at least one week prior to their registration date.

DESIGN

DESIGN C200
Introduction to Design

Prerequisites: CEGEP Programme 051.00 or Art C200 or the equivalent. The dynamics and structures of two and three dimensional design. (6 credits) *NOTE A/See § 200.3 NOTE: This course combines Design 201[3] and Design 301[3] given 1975-77.*

GRAPHIC DESIGN

GRAPHIC DESIGN C200
Graphic Design I

Prerequisite: Graphic Design C-250 previously or concurrently. The application of visual ideas to communication processes. (6 credits) *NOTE A/See § 200.3*

GRAPHIC DESIGN C250
Design and Typography

Prerequisite: CEGEP Programme 051.00 or Art C200 or the equivalent. Graphic Design C200 should be taken concurrently by Graphic Design majors. The dynamics and structures of two-dimensional design; a basic study of letter form and typography and their application in graphic communication. (6 credits) *NOTE A/See § 200.3 NOTE: This course combines Design 201[3] and Graphic Design 201[3] given 1975-77*

GRAPHIC DESIGN C300
Graphic Design II

Prerequisite: Graphic Design C200. An intermediate design course which deals with various aspects of visual invention and expression. Problem solving and visual analysis are practised in projects. Work is related to the student's field of interest. (6 credits) *NOTE A/See § 200.3*

GRAPHIC DESIGN C301
Graphic Communication

Prerequisite: Graphic Design C200, C250. An intermediate design course which deals with various aspects of graphic communication. (3 credits) *NOTE A/See § 200.3*

GRAPHIC DESIGN C400
Graphic Design III

Prerequisite: Graphic Design C300. Students will experiment with a variety of media and be individually directed in planning and completing their design projects. (6 credits) *NOTE A/See § 200.3*

GRAPHIC DESIGN C450
Advanced Graphic Communication

Prerequisite: Graphic Design C250, C300, C301. A continuation of Graphic Design C301. (6 credits) *NOTE A/See § 200.3*

PHOTOGRAPHY

PHOTOGRAPHY C201
Photography I

Prerequisite: CEGEP Programme 051.00 or Art C200 or equivalent. The use of photography and light as a source of image and ideas. (3 credits) *NOTE A/See § 200.3*

PHOTOGRAPHY C301
Photography II

Prerequisite: Photography C201. A continuation of Photography C201. (3 credits) *NOTE A/See § 200.3*

PRINTMAKING

PRINTMAKING C200
Printmaking I

Prerequisite: Drawing C200 previously or concurrently. A study of the basic principles of printmaking through experience with various approaches both traditional and contemporary. A student may specialize in lithography, serigraphy, or intaglio. (6 credits) *NOTE A/See § 200.3*

PRINTMAKING C300
Printmaking II

Prerequisite: Printmaking C200. Continuation of Printmaking C200. (6 credits) *NOTE A/See § 200.3*

PRINTMAKING C400
Printmaking III

Prerequisite: Printmaking C300. Continuation of Printmaking C300. (6 credits) *NOTE A/See § 200.3*

81.6 Studio Art II

(Drawing, Painting, Sculpture)

Associate Professor and Assistant Director Visual Arts, Studio II
J. I. SMITH

Professors
G. MOLINARI
A. PINSKY

Associate Professors
U. COMTOIS
Y. GAUCHER
J. KRAUSE
J. MILLER

Assistant Professors
M. DEWES
R. GORDON
H. W. JONES
P. LANDSLEY

Lecturer
W. KROL

81.6.1 COURSE DESCRIPTIONS

PORTFOLIOS: Any student without a CEGEP Diploma in 051.00 Programme who wishes to register for a course in Studio Art must submit a portfolio of their work to the Portfolio Committee of the Division of Visual Arts at least one week prior to their registration date.

ART

ART C200
Studio Art I
An introduction to studio art including drawing, painting, design, sculpture and related media. (6 credits) *NOTE A/See § 200.3*

ART C434
Materials and Methods of the Artist
Prerequisite: Permission of the Division. Through a series of special projects this course will familiarize the student with some of the various materials, techniques and other aspects of the artist's craft. Since special emphasis will be given to historical techniques, this course is particularly recommended to all students in art history. Lectures and studio periods. (6 credits)

ART C436
Studio Workshop: Special Studies
Prerequisite: 3rd year standing * and permission of the Section. This course will provide the opportunity for a limited number of students to pursue advanced studies in the studio area. (6 credits)
** less than 36 credits remaining in degree programme*

ART C460
Analysis of Great Works of Art
A course in art principles. Through the formal analysis of selected masterpieces of painting and sculpture the student is led to a fuller comprehension of the nature of formal order in the arts. (6 credits) *NOTE A/See § 200.3*

ART C461
Aesthetic Inquiry in Visual Arts
A course in the application of aesthetic theories to the objects and events of visual arts. Topics will include the artistic process as expression, intuition and imagination. Further consideration will be given to the products of painting, sculpture and graphics emphasizing various contemporary critical and theoretical stances. (6 credits) *NOTE A/See § 200.3*

DRAWING

DRAWING C200
Drawing I
Prerequisite: CEGEP Programme 051.00 or Art C200 or equivalent. An exploration of drawing as a means of expression. Various media are employed to examine and express form, space, figurative and other graphic images. (6 credits) *NOTE A/See § 200.3*

DRAWING C300
Drawing II
Prerequisite: Drawing C200. A drawing course in which various media and forms of expression will be explored at the more advanced level. Lectures and studio periods. (6 credits)

DRAWING C400
Drawing III
Prerequisite: Drawing C300. Continuation of Drawing C300. (6 credits)

PAINTING

PAINTING C200
Painting I
Prerequisite: CEGEP Programme 051.00 or Art C200 or equivalent. An exploration of painting, colour, style, image, visual skills and the technology of painting materials. (6 credits) *NOTE A/See § 200.3*

PAINTING C300
Painting II
Prerequisite: Painting C200. A course in which various media and forms of expressions will be explored at the more advanced level. (6 credits) *NOTE A/See § 200.3*

PAINTING C400
Painting III

Prerequisite: Painting C300. A continuation of Painting C300. (6 credits) *NOTE A/See § 200.3*

PAINTING C450
Advanced Studio in Painting

Prerequisite: Painting C400 previously or concurrently. A continuation of Painting C400. (6 credits) *NOTE A/See § 200.3*

SCULPTURE

SCULPTURE C200
Sculpture I

Prerequisite: CEGEP Programme 051.00 or Art C200 or equivalent. An investigation into the methods, materials and modes of expression in sculpture. Both traditional and contemporary materials and techniques will be used. (6 credits) *NOTE A/See § 200.3*

SCULPTURE C300
Sculpture II

Prerequisite: Sculpture C200. Continuation of Sculpture C200. (6 credits) *NOTE A/See § 200.3*

SCULPTURE C400
Sculpture III

Prerequisite: Sculpture C300. Continuation of Sculpture C300. (6 credits) *NOTE A/See § 200.3*

ART C326
Art in Sport

Students will study works of art depicting sport in various periods and places. Works in several media representative of the culture of their origin will be selected, as will as documents treating the culture from anthropoligical, historical and sociological perspectives. The course will be conducted jointly by members of several departments as well as by invited speakers. (6 credits)

STUDIO ART C325
Aesthetic in Design and Colour

A study of the functional and aesthetic elements of design and colour. The relationship between design and the environment. Trends in contemporary aesthetic thinking will be reviewed. The course takes the form of a group seminar, practical studio work, selected readings and critical analysis. (3 credits)

STUDIO ART C370
Interior Design

An introductory course, surveying the cultural and aesthetic implications of interior design with discussions of design fundamentals, principles, materials, colour, texture and lighting related with practical exercises investigating and illustrating these topics. An introduction to drafting and its uses in interior design. (3 credits)

STUDIO ART C421
Industrial Design

A course integrating applied design of various media in areas of display, exhibits, product design and industrial design. Emphasis placed on designing and communicating to the client and public. The student is involved in space planning, use of materials, human engineering and professional presentation techniques. (3 credits)

STUDIO ART C480
Anatomy and Drawing

Prerequisites: Art C200, Drawing C200, Design C200. Basic anatomy in drawing the human figure will be taught. Both static and action poses will be dealt with. Special emphasis will be placed on portraiture. Anatomical analysis, including proportion, will be investigated. (3 credits)

81.7 Art Education

Professor and Assistant Director Visual Arts, Art Education
L. SHERMAN

Associate Professors
S. HORNER
W. MARTIN
E. SACCA

Assistant Professors
F. BARRY
H. SHUMWAY

Lecturer
N. WAGNER

81.7.1 PROGRAMMES

Students are responsible for fulfilling their particular degree requirements, hence the following sequence must be read in conjunction with § 81.3.

The superscript indicates credit value.

60 BFA Major in Art Education

Pattern A

21* to 33 Studio Art Elective credits (3 credits may be substituted from Music, Cinema or Theatre Arts.)

12 to 24 Art History Elective credits (6 credits may be chosen from Art C460[6], C461[6].)

15 Art C430[3], Art C432[6], Art Education C400[6] (Third year).

NOTE: Pattern A is recommended for teaching Studio and/or Art History at the secondary level. Students applying for the Diploma in Art Education and Quebec Teacher Certification must, in addition, take Education S201[6].

** The remainder of 60 credits.*

60 BFA Major in Art Education

Pattern B

18 Studio Art Elective credits

6 Art History Elective credits

21 Elective credits chosen from Cinema, Music, Theatre Arts*

15 Art C430[3], Art C432[6], Art Education C400[6] (Third year)

NOTE: Pattern B is recommended for teaching the "expressive" arts at the elementary level or for inter-arts education. Students applying for the Diploma in Art Education and Quebec Teacher Certification must, in addition, take Education S-201[6].

** In Theatre Arts students choose from Drama in Education C200[6], C300 6; Scenography C200[6], C201[3], C202[3], C320[6]; Theatre C310[6]. ***

*** Alternate courses may be selected with permission of the Theatre Section.*

81.7.2 COURSE DESCRIPTIONS

ART

ART C430
Multi-Media

Prerequisites: Eighteen credits in studio courses. The technology of video, film, slides, sound, etc, as media for the artist and art educator. (3 credits) *NOTE A/See § 200.3*

ART C432
Crafts

Prerequisites: Eighteen credits in studio courses. The basis of crafts such as ceramics, textiles, metal work, leathercraft, etc. as potential media for the artist and art educator. (6 credits) *NOTE A/See § 200.3*

ART EDUCATION

ART EDUCATION C200
Art for Classroom Use

A practical and theoretical course of particular use to teachers. Concepts of art education, the use of materials and techniques are considered in relation to classroom situations. Students are introduced to various art media including painting, collage construction, printing and modelling. The course includes the use of slides, films and selected readings. (6 credits) *NOTE A/See § 200.3*

ART EDUCATION C400
Seminar in Art Education

Prerequisite: Art education majors or permission of the Section. The development of a philosophy of art education on the basis of studio experiences, readings, the observation of and participation in teaching situations, etc. (6 credits) *NOTE A/See § 200.3*

CERAMICS

CERAMICS C200
Ceramics I

Prerequisite: Art Education major or permission of the Section. An introduction to clay as an art medium. The student will investigate the various techniques for forming, shaping and decorating clay for firing and glazing. (6 credits)

81.8 Art History

Assistant Professor and Assistant Director Visual Arts, Art History
R. GREENBERG

Professor
E. F. COOKE

Associate Professors
D. ANDRUS
H. GEORGE
W. SANDERSON

Assistant Professors
E. JAMES
L. LACROIX
S. PAIKOWSKY
G. WALTERS

81.8.1 PROGRAMMES

Students are responsible for satisifying their particular degree requirements, hence the following sequence must be read in conjunction with § 81.3.

The superscript indicates credit value.

60 BFA Honours in Art History

24-30 Art History C240[6], C339[6], C342[6], C343[6], C345[6]
30-36 Chosen from Art History C338[6], C439[6], C441[6], C442[6], C443[6], C444[6], C445[6], C446[6], C471[3], C472[3], C480[6], C490[6]

60 BFA Major in Art History

36-42 Art History C240[6], C339[6], C342[6], C343[6], C443[6], C444[6], C480[6]
18-24* Chosen from Art History C338[6], C345[6], C439[6], C441[6], C442[6], C445[6], C446[6], C471[3], C472[3], C473[3], C474[3], C481[6], C490[6], C491[6], Art C460[6]
** Up to 12 credits may be substituted for Art History courses. These credits may be selected from any faculty in consultation with the Assistant Director, Art History.*

60 BFA Major in Art History and Studio Art

30* Chosen from Art History C240[6], C338[6], C339[6], C342[6], C343[6], C345[6], C441[6], C442[6], C443[6], C444[6], C446[6], C480[6], C490[6]
30 Studio Art Elective credits (6 credits may be from Scenography C200[6], C201[3], C202[3], Cinema C311[6] or 6 credits in Music chosen in consultation with the adviser.)
** Art C460[6] or Art C461[6] may be substituted for 6 credits in Art History.*

60 BFA Major in Fine Arts *

0-24 Music Section: Music Elective credits chosen in consultation with the programme adviser, Music.
0-24 Studio Art Section: Studio Elective credits which may include Art C460[6].
0-24 Art History Section: Chosen from Art History C240[6], C339[6], C342[6], C343[6], C345[6], C443[6], C445[6].
0-24 Cinema Section: Chosen from Cinema C211[6], C212[6], C311[6], C312[6], C321[6], C322[6], C426[3], C427[3].
0-24 Theatre Arts Section: Chosen from Theatre Performance C201[3], C202[3], C203[3], C204[3], Scenography C200[6], C201[3], C202[3], C300[6], C320[6], Drama in Education C200[6], Theatre C201[3], C300[6], C301[3], C401[3].
** Credits must be taken in a minimum of 3 fields with a maximum of 24 credits in any single field.*

30 Minor in Art History

18-24 Art History C240[6], C342[6], C343[6], C444[6]
6-12 Chosen from Art History C338[6], C339[6], C345[6], C439[6], C441[6], C442[6], C443[6], C445[6], C446[6], C471[3], C472[3], C480[6], C490[6]

30 Minor in Art History and Studio Art

12-18 Studio Art Elective credits
12-18 Art History C240[6], C338[6], C339[6], C342[6], C343[6], C345[6], C441[6], C443[6], C444[6], C445[6], C446[6].

81.8.2 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.3

ART HISTORY C232
Introduction to Architecture and Sculpture

To enable the student to understand and appreciate great works in architecture and sculpture and to develop a discriminative understanding of three-dimensional form in design and in his architectural environment. The main types, styles and techniques of these arts are explained and illustrated. To understand their significance, the student is encouraged to become familiar with great examples of these arts through pictorial reproductions, slides, models, museum visits, and field trips. (6 credits) *NOTE A/See § 200.3*

ART HISTORY C240
Introduction to Art History

A study of selected works which represent outstanding and significant achievements in the visual arts. (6 credits)

ART HISTORY C249
Canadian Sculpture and Architecture

A study of the more important developments of Canadian architecture and sculpture from indigenous forms to contemporary works. (6 credits) *NOTE A/See § 200.3*

ART HISTORY C338
Art in the Ancient Near East

An introduction to the art, architecture and minor arts in the ancient Near East and Aegean placing special emphasis upon Egypt, Mesopotamia, Crete and the Cycladic Islands. (6 credits) *NOTE A/See § 200.3*

ART HISTORY C339
Art and Architecture in Ancient Greece and Rome

An introduction to the art and architecture of the Mycenaean, Greek, Etruscan and Roman civilizations. (6 credits) *NOTE A/See § 200.3*

ART HISTORY C342
The Renaissance in Italy

A survey of painting, sculpture and architecture in Italy during the fifteenth and sixteenth centuries. (6 credits) *NOTE A/See § 200.3*

ART HISTORY C343
The History of Nineteenth Century Art

Starting with the French Revolution and Neo-Classicism, this course will examine Romanticism, Realism, Naturalism, Impressionism, Post-Impressionism and other nineteenth century European movements leading to the emergence of Fauvism in the twentieth century. (6 credits) *NOTE A/See § 200.3*

ART HISTORY C345
Art in the Twentieth Century

Prerequisite: Art History C240 or C343. Commencing with Cubism, this course will examine the main movements and trends which have occurred in western art during this century. (6 credits) *NOTE A/See § 200.3*

ART HISTORY C439
Iconography

Prerequisite: Art History C240 or permission of the Section. This course will examine recurring visual symbols in Western Art which are derived from Classical or Christian literature. (6 credits)

ART HISTORY C441
The History of Medieval Art

Prerequisite: Art History C240. This course will consider the growth of European art and architecture from Early Christian times through the fourteenth century. (6 credits) *NOTE A/See § 200.3*

ART HISTORY C442
The Renaissance in Northern Europe

Prerequisite: Art History C240 or C342. This course will investigate the development of art in France, Flanders, Germany and Austria in the fifteenth and sixteenth centuries. (6 credits) *NOTE A/See § 200.3*

ART HISTORY C443
History of Baroque and Rococo Art

Prerequisite: Art History C240. This course will examine the major achievements in Dutch, Flemish, English, French, Italian, Spanish, German and Austrian art and architecture in the seventeenth and eighteenth centuries. (6 credits) *NOTE A/See § 200.3*

ART HISTORY C444
The Arts in Canada

Prerequisite: Art History C240 or enrollment in the Canadian Studies Major. A history of the arts in Canada from the 17th century to the present day. Where relevant, special attention will be given to those European and American influences which have shaped its growth. (6 credits) *NOTE A/See § 200.3*

ART HISTORY C445
American Art and the European Background

Prerequisite: Art History C240. A survey of American Art from earliest colonial times into the early 20th century, viewed against the background of those European developments which have significantly affected it. (6 credits) *NOTE A/See § 200.3*

ART HISTORY C446
History of Modern Architecture

Prerequisite: Art History C240 or permission of the Section. An examination of the major building styles from the Georgian era through the 20th century with emphasis on the contributions of individual architects from Louis Sullivan to Mies van der Rohe. (6 credits) *NOTE A/See § 200.3*

ART HISTORY C471
Special Topics in Art History

Prerequisite: Twelve credits in Art History or permission of the Section. A seminar for advanced students which will provide an opportunity for the study of limited and more specialized aspects of Art History. (3 credits) *NOTE A, C/See § 200.3*

ART HISTORY C472
Special Topics in Art History

Prerequisite: Permission of the Section. A student repeating Art History C471 registers under Art History C472 for credit. (3 credits) *NOTE A, C/See § 200.3*

ART HISTORY C473
Special Topics in Art History

Prerequisite: Permission of the Section. A student repeating Art History C472 registers under Art History C473 for credit. (3 credits) *NOTE C/See § 200.3*

ART HISTORY C474
Special Topics in Art History

Prerequisite: Permission of the Section. A student repeating Art History C473 registers under Art History C474 for credit. (3 credits) *NOTE C/See § 200.3*

ART HISTORY C480
Special Studies in the History of Art

Prerequisite: Twelve credits in Art History. Students in this course will examine and discuss selected aspects of Art History. The areas chosen for consideration will vary from year to year according to the instructor's field of specialization. All students will be required to undertake research projects and to submit papers based on their investigation. (6 credits) *NOTE A, C/See § 200.3*

ART HISTORY C481
Special Studies in the History of Art

Prerequisite: Twelve credits in Art History. A student repeating Art History C480 registers under Art History C481 for credit. (6 credits) *NOTE C/See § 200.3*

ART HISTORY C490
Advanced studies in Art History

Prerequisite: Eighteen credits in Art History and permission of the Section. A course for advanced students which will provide for the study of limited and more specialized areas of Art History. The areas chosen for study will vary from year to year according to the instructor's field of specialization. All students will be required to conduct research on selected aspects of the course topic. (6 credits) *NOTE A/See § 200.3*

ART HISTORY C491
Advanced Studies in Art History

Prerequisite: Permission of the Section. A student repeating Art History C490 registers under Art History C491 for credit. (6 credits) *NOTE C/See § 200.3*

81.9 Cinema

Assistant Professor and Assistant Director
Visual Arts, Cinema
J. LOCKE

Assistant Professors
A. HERMAN
T. WAUGH

81.9.1 PROGRAMMES

Students are responsible for fulfilling their particular degree requirements, hence the following sequences must be read in conjunction with § 81.3.

The superscript indicates credit value.

48 BFA Major in Cinema

24 Cinema C211[6], C212[6], C311[6], and either C312[6] or C411[6]

24* Cinema Elective credits
** A student may substitute 3 to 12 credits chosen from French S461[6], Photography C201[3] and Photography C301[3].*
NOTE: Students who received credit for Cinema 211 or Cinema 212 before September 1971 must consider these courses as equivalent to Cinema C311 and Cinema C312, respectively, for the purpose of fulfilling degree requirements.

60 BFA Major in Fine Arts *

0-24 Music Section: Music Elective credits chosen in consultation with the programme adviser, Music.

0-24 Studio Art Section: Studio Elective credits which may include Art C460[6].

0-24 Art History Section: Chosen from Art History C240[6], C339[6], C342[6], C343[6], C345[6], C443[6], C445[6].

0-24 Cinema Section: Chosen from Cinema C211[6], C212[6], C311[6], C312[6], C321[6], C322[6], C426[3], C427[3].

0-24 Theatre Arts Section: Chosen from Theatre Performance C201[3], C202[3], C203[3], C204[3], Scenography C200[6], C201[3], C202[3], C300[6], C320[6], Drama in Education C200[6], Theatre C201[3], C300[6], C301[3], C401[3].
** Credits must be taken in a minimum of 3 fields with a maximum of 24 credits in any single field.*

30 Minor in Cinema

12 Cinema C211[6], C212[6]

18* Chosen from Cinema C311[6], C312[6], C313[6], C321[6], C322[6], C420[3], C421[3], C426[3], C427[3]
** French S461[6] may be substituted for 6 credits in Cinema.*
NOTE: Students who received credit for Cinema 211 or Cinema 212 before September 1971 must consider these courses equivalent to Cinema C311 and Cinema C312 respectively for the purpose of fulfilling degree requirements.

819.2 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.3

CINEMA C211
History of Film

A study of the history of film from its beginning to the 1950's. Changes in the forms, functions, aesthetics and technology of film will be dealt with through the examination of individual works seen in a chronological sequence. Weekly screenings. (6 credits) *NOTE A/See § 200.3 NOTE: A French section of this course will be offered under the direction of the Conservatory of Cinematographic Art.*

CINEMA C212
Film Aesthetics

A study of the aesthetics of film. Topics include film criticism, theories about the fundamental elements of film, and comparisons between films which do not depend on their date of production. Problems of film description, interpretation and evaluation will be discussed. Weekly screenings. (6 credits). *NOTE A/See § 200.3*

CINEMA C311
An Introduction to Filmmaking I

Prerequisite: Cinema C211 or C212, previously or concurrently. An introductory course in the theory and practice of filmmaking. This course will stress the individual student's creative efforts in producing films in Super 8 or 16mm. Lectures and laboratory periods. (6 credits). *NOTE A/See § 200.3*
NOTE: i) Students who received credit for Cinema 211 prior to September 1971 may not take this course for credit. ii) Students are required to bear the cost of film stock, processing, printing and other materials.

CINEMA C312
Animation I

Prerequisite: Written permission of the Cinema Section and either Cinema C311 or 6 credits from studio courses in the visual arts. The theory and practice of animation. Lectures and studio periods. (6 credits). *NOTE A/See § 200.3*
NOTE: i) Students who received credit for Cinema 212 prior to September 1971 may not take this course for credit. ii) Students are required to bear the cost of film stock, processing, printing, and other materials.

CINEMA C313
Animation II

Prerequisite: Written permission of the Cinema Section and Cinema C312. A student repeating Cinema C312 registers under Cinema C313 for credit. (6 credits) *NOTE A/See § 200.3 NOTE: Students are required to bear the cost of film stock, processing, printing and other materials.*

CINEMA C321
The Art of Film Directors

Prerequisite: Cinema C211 or second year standing.* A concentrated study of the work of several major directors from different periods in film history. Each director's work will be examined in detail with representative films from distinct periods. The films will be considered in terms of thematic and stylistic consistency and variation as well as biographical, social and political factors. Weekly screenings. (6 credits)
** less than 66 credits remaining in degree programme*

CINEMA C322
Contemporary Film

Prerequisite: Cinema C211 or second year standing*. This course begins with the New Wave in France and the resurgence of European film in the late 1950's and includes recent trends in documentary, Japanese and Underground film. The films will be studied in the context of major philosophical, political and cultural developments of the period as well as contemporaneous developments in other art forms. Weekly screenings. (6 credits)
** less than 66 credits remaining in degree programme.*

CINEMA C333
Script Writing I

Prerequisite: Written permission of the Cinema Section and Cinema C311. An introduction to writing for film with special emphasis on the relation of the script to filmmaking. Students are expected to submit work of their own for discussion, analysis and possible production in filmmaking courses. (3 credits)

CINEMA C334
Problems and Methods of Film Production and Distribution

Prerequisite: Cinema C311. Topics include organizing a film project, financial aspects of film production and distribution, legal problems, film laboratory procedures and postproduction operations. (3 credits)

CINEMA C411
Filmmaking II

Prerequisite: Written permission of the Cinema Section and Cinema C311 An intermediate course in the theory and practice of filmmaking. Lip sync 16mm production is introduced in all its aspects: cinematography, sound recording, editing. Lectures and laboratory periods. (6 credits, *NOTE A/See § 200.3 NOTE: Students are required to bear the cost of film stock, processing, printing and other materials.*

CINEMA C412
Filmmaking III

Prerequisite: Written permission of the Cinema Section and both Cinema C212 and C411. The completion of an advanced 16mm film project including its writing, design, production and editing. (6 credits) *NOTE A/See § 200.3*
NOTE: Students are required to bear the cost of film stock, processing, printing and other materials.

CINEMA C413
Filmmaking III

Prerequisite: Written permission of the Cinema Section and Cinema C412. A student repeating Cinema C412 registers under Cinema C413 for credit. Only students who were granted an exemption from Cinema C311 or C411 may repeat Cinema C412. (6 credits) *NOTE A /See § 200.3 NOTE: Students are required to bear the cost of film stock, processing, printing, and other materials.*

CINEMA C420
Special Topics in Cinema

Prerequisite: Written permission of the Cinema Section. A course for advanced students which will provide an opportunity for the study of limited and more specialized aspects of cinema. (3 credits) *NOTE A; C/See § 200.3*

CINEMA C421
Special Topics in Cinema

Prerequisite: Written permission of the Cinema Section. A student repeating Cinema C420 registers under Cinema C421 for Credit. (3 credits) *NOTE A; C/See § 200.3*

CINEMA C426
English Canadian Film

A survey of English Canadian film from the earliest surviving works to the present. Topics include fictional, documentary, animation and experimental film. The role of the National Film Board will be discussed. Weekly Screenings. (3 credits)

CINEMA C427
Le cinéma québécois

Revue des films québécois mettant principalement l'accent sur les oeuvres contemporaines. Les aspects culturels et politiques particuliers de ces films seront examinés. La structure de l'industrie cinématographique du Québec et le rôle de l'Office National du Film y seront traités particulièrement. Visionnements hebdomadaires. (3 credits)

CINEMA C428
Independent Study I

Prerequisite: Written permission of the Cinema Section. A course of independent study in which the student may explore a specific area of Film Production or Cinema Studies. (3 credits)
NOTE: With the written permission of the Cinema Section, a student may take this course twice for credits. The student registers the second time under Cinema C429.

CINEMA C429
Independent Study II

Prerequisite: Written permission of the Cinema Section A student repeating Cinema C428 a second time registers for credits under Cinema C429. (3 credits)

CINEMA C436
Professional Internship

Prerequisite: Second year standing* and enrolment as a Cinema Major. A Film Production student who has been employed within the film industry for not less than 500 hours within the same calendar year or similarly, a Cinema Studies student who has been employed for the same amount of time in film research, archival work, editing a film publication or in writing film criticism, may apply for 6 credits on the understanding that the Cinema Section must be satisfied that the work was done under the joint supervision of a qualified professional and a full-time Cinema Faculty member. (6 credits)
* *less than 66 credits remaining in degree programme.*

CINEMA C437
Technical Aspects of Filmmaking

Prerequisite: Cinema C311. Cinema Majors only. Creative and experimental exercises in cinematography, sound and other components of filmmaking. The complex technology of filmmaking will be emphasized as forming a basis for the creative use of the medium. (6 credits). *NOTE A/See § 200.3*

CONSERVATOIRE D'ART CINEMATOGRAPHIQUE

Les sections des cours suivants seront offerts sous la direction du Conservatoire d'Art Cinématographique:

CINEMA C211
L'histoire du cinéma

Historique du cinéma, de ses débuts aux années 50. Les changements dans les formes, les fonctions, l'esthétique et les aspects techniques du cinéma y seront traités par l'examen des oeuvres individuelles vues dans un ordre chronologique. Visionnements hebdomadaires. (6 crédits) *NOTE A/See § 200.3*

CINEMA C427
Le cinéma québécois

Revue des films québécois mettant principalement l'accent sur les oeuvres contemporaines. Les aspects culturels et politiques particuliers de ces films seront examinés. La structure de l'industrie cinématographique du Québec et le rôle de l'Office National du Film y seront traités particulièrement. Visionnements hebdomadaires. (3 crédits)

81.10 Theatre Arts

Director of the Division of Performing Arts
J. CAZALET

Associate Professor and Assistant Director Performing Arts, Theatre Arts
P. SPENSLEY

Professor
N. SPRINGFORD

Associate Professors
J. CAZALET
G. GROSS

Assistant Professors
R. ALLISON
D. HOFFMAN
W. REZNICEK
K. SLOAN

Lecturers
P. ABRAMS
B. MACKAY

81.10.1 PROGRAMMES

Students are responsible for fulfilling their particular degree requirements, hence the following sequence must be read in conjunction with § 81.3.

The superscript indicates credit value.

60 BFA Specialization in Drama in Education

OPTION I

42 Scenography C201[3], Theatre Performance C203[3], Drama in Education C200[6], C300[6], C400[6], Production C201[3], C301[3], C302[3], Theatre C201[3], C300[6]

18 Chosen from Scenography C200[6], C202[3], C301[3], C302[3], C321[3], Theatre Performance C201[3], C202[3], C204[3], C303[3], C304[3], C305[3], C306[3], C403[3], Theatre C310[6], C320[6], C403[3], C404[3], Drama in Education C410[6], Production C401[3], C402[3]

OPTION II

Substitute Drama in Education C410[6] or Theatre C310[5] for Drama in Education C400[6].

60 BFA Specialization in Theatre Performance

9 Theatre C201[3], C300[6]

36 Theatre Performance C201[3], C202[3], C203[3], C204[3], C301[3], C303[3], C304[3], C306[3], C401[3], C402[3], C403[3], C404[3]

15 Production C201[3], C301[3], C302[3], C401[3], C402[3]

60 BFA Specialization in Theatre Scenography

36 Chosen from Scenography C200[6], C201[3], Production C201[3], C301[3], C302[3], C401[3], C402[3], Theatre C201[3], C300[6]

6 Chosen from Scenography C300[6], C320[6]

12 Chosen from Scenography C300[6], C301[3], C302[3], C320[6], C321[3], C400[6], C401[3], C420[6]

6 Theatre Arts Elective credits

54 BFA Major in Drama

12 Theatre C201[3], C300[6], Theatre Performance C201[3]

6 Chosen from Production C201[3], C301[3], C303[3], C304[3], C305[3]

9 Chosen from Scenography C200[6], C201[3], C202[3], C302[3], C321[3], Theatre Performance C202[3], C203[3], Production C201[3], C301[3], C302[3]

21 Theatre Arts Elective credits selected in consultation with the Theatre Arts Section

6 Dramatic Literature*

* *Students will select 6 credits in Dramatic Literature in consultation with the Theatre Arts Section.*

60 BFA Major in Fine Arts *

0-24 Music Section: Music Elective credits chosen in consultation with the programme adviser, Music.

0-24 Studio Art Section: Studio Art Elective credits which may include Art C460[6].

0-24 Art History Section: Chosen from Art History C240[6], C339[6], C342[6], C343[6], C345[6], C443[6], C445[6].

0-24 Cinema Section: Chosen from Cinema

THEATRE C402
Playwriting Workshop

Prerequisite: Permission of the Section. Study of existing methods of playwriting in relation to stage production. Emphasis is on the creative work of the student guided by the criticism of the class and the instructor in the processes of stage realization. Promising scripts will receive workshop production. (3 credits) *NOTE A/See § 200.3*

THEATRE C403
Advanced Practicum

Prerequisite: Permission of the Section. Special studies in acting, directing, playwriting, design, technical production, or other related areas. (3 credits) *NOTE A/See § 200.3*

THEATRE C404
Seminar in Theatre

Prerequisite: Permission of the Section. Research in one phase of theatre. A specific topic will be chosen each year from such areas as the history of acting, directing, or design aspects of theatre practice or theatre history. (3 credits) *NOTE A/See § 200.3*

THEATRE C413
Advanced Practicum

Prerequisite: Written permission of the Section. Continuation of Theatre C403. A student who has completed Theatre C403 registers under Theatre C413 for further credit. (3 credits)

THEATRE C414
Seminar in Theatre

Prerequisite: Written permission of the Section. Continuation of Theatre C404. A student who has completed Theatre C404 registers under Theatre C414 for further credit. (3 credits)

DRAMA IN EDUCATION

DRAMA IN EDUCATION C200
Creative Drama I

Introduction to the principles and practice of creative drama. Improvisation in movement and oral expression. Development of the individual's expressive capacities. Relating creative drama to learning processes in schools. (6 credits) *NOTE A/See § 200.3*

DRAMA IN EDUCATION C300
Creative Drama II

Prerequisite: Drama in Education C200. Creative drama activities, integrating music, art, and drama forms. Exploration of innovative uses of audio and visual materials. (6 credits) *NOTE A/See § 200.3*

DRAMA IN EDUCATION C400
Creative Drama III

Prerequisites: Drama in Education C300 and permission of the Section. Advanced individual and group development through improvisation. Collective creation. Pedagogy and the drama curriculum. (6 credits)

DRAMA IN EDUCATION C410
Children's Theatre

Prerequisite: Written permission of the Section. Theories of stage presentation for the child audience. Study of scripts, performance techniques, special conditions and responsibilities. (6 credits)

PRODUCTION

PRODUCTION C201
Theatre Production I

Prerequisite: Written permission of the Section. Practical experience in theatre production in the areas of acting, playwriting, management, design and/or technical practice. The nature of the student's participation will be determined in consultation with faculty. Attendance at rehearsals and/or workshops outside of class time will be required. (3 credits)

PRODUCTION C301
Theatre Production II

Prerequisites: Production C201 and written permission of the Section. Continuation of Production I. The nature of the student's participation will be determined in consultation with faculty. Attendance at rehearsals and/or workshops outside of class time will be required. (3 credits)

PRODUCTION C302
Theatre Production III

Prerequisites: Production C301 and written permission of the Section. Continuation of Production II. The nature of the student's participation will be determined in consultation with faculty. Attendance at rehearsals and/or workshops outside of class time will be required. (3 credits)

PRODUCTION C303*
Art Dramatique

Prérequis: Facilité en français et l'approbation de la Section. Cet atelier pratique vise à sensibiliser les étudiants aux exigences du texte dramatique et aux réalités de la scene. Les membres de ce cours monteront et interpréteront une pièce ou quelques actes du théâtre français ou québécois, ou des scènes créées dans le cours. (3 crédits)

* *NOTE: Theatre Arts and Drama Majors may substitute this course for Production C403.*

PRODUCTION C304
Independent Study I

Prerequisite: Permission of the Section and six credits in Performance or Scenography. Credit granted to individual students under the supervision of a Faculty member for practical drama production activity outside the academic Theatre programme. Each completed project will include planning, participation and a written evaluation of the practical experience. (3 credits) *NOTE A/See § 200.3*

PRODUCTION C305
Independent Study II

Prerequisite: Production C304 and permission of the Section. Continuation of Production C304. (3 credits) *NOTE A/See § 200.3*

PRODUCTION C401
Theatre Production IV

Prerequisites: Production C302 and written permission of the Section. Continuation of Production III. The nature of the student's participation will be determined in consultation with faculty. Attendance at rehearsals and/or workshops outside of class time will be required. (3 credits) *NOTE A/See § 200.3*

PRODUCTION C402
Theatre Production V

Prerequisites: Production C401 and written permission of the Section. Continuation of Production IV. The nature of the student's participation will be determined in consultation with faculty. Attendance at rehearsals and/or workshops outside of class time will be required. (3 credits)

THEATRE PERFORMANCE

THEATRE PERFORMANCE C201
Acting I

Emphasis on developing imagination and physical expression, including basics of improvisation. Preparation of scenes and play excerpts for class study. (3 credits) *NOTE A/See § 200.3*

THEATRE PERFORMANCE C202
Acting II

Prerequisite: Theatre Performance C201. Preparation for the role, including scene and character analysis and the continued development of imagination and expression. Focus will be on the presentation of scenes from plays. (3 credits) *NOTE A/See § 200.3*

THEATRE PERFORMANCE C203
Voice, Movement and Speech I

An introduction to the use of the body as an acting tool, with emphasis on movement, comprising exercises for vocal and physical flexibility, relief from tension, expressiveness of gesture and body composition, spatial awareness, vocal support, vocal quality, and speech mechanics. (3 credits) *NOTE A/See § 200.3*

THEATRE PERFORMANCE C204
Voice, Movement and Speech II

Prerequisite: Theatre Performance C203. Integration of body and voice with increased focus on the speech processes. (3 credits) *NOTE A/See § 200.3*

THEATRE PERFORMANCE C301
Performance Techniques I

Prerequisites: Enrolment in Specialization in Theatre Performance, or written permission of the Section. Fundamentals of special stage techniques for the theatre performer such as stage combat, dance and singing. (3 credits)

THEATRE PERFORMANCE C303
Voice, Movement and Speech III

Prerequisite: Theatre Performance C204. Continued integration and development of physical and vocal expression with emphasis on performance analysis. (3 credits)

THEATRE PERFORMANCE C304
Voice, Movement and Speech IV

Prerequisite: Theatre Performance C303. Continued tonics of physical and vocal expression, with emphasis on the study of dialects. (3 credits)

THEATRE PERFORMANCE C305
Directing I

Prerequisites: 12 credits from Theatre Performance and Scenography and written permission of the Section. Examination of and experimentation in staging and production organization. Exercises in visual, structural and conceptual analysis. (3 credits) *NOTE A/See § 200.3*

THEATRE PERFORMANCE C306
Acting III

Prerequisites: Theatre Performance C202 and C204 and written permission of the Section. A continuation of Acting II focusing on an in-depth study of the development of character in relation to the dramatic text beginning with the realistic genre. Presentation of scenes. (3 credits).

THEATRE PERFORMANCE C401
Acting IV

Prerequisites: 24 credits in Theatre Performance (excluding Theatre Performance C305) and written permission of the Section. A studio course in acting styles with detailed analysis of plays of various periods. (3 credits)

THEATRE PERFORMANCE C402
Acting V

Prerequisites: 24 credits in Theatre Performance (excluding Theatre Performance C305) and written permission of the Section. Exploration of and experimentation in contemporary approaches to performance style and form. (3 credits)

THEATRE PERFORMANCE C403
Voice, Speech and Movement V

Prerequisites: Theatre Performance C304 and written permission of the Section. Continuation of Theatre Performance C304. Advanced study of Voice, Speech and Movement including scripting of original material for such forms of performance as reader's theatre and mime. Individual and group performance. (3 credits).

THEATRE PERFORMANCE C404
Performance Techniques II

Prerequisites: Theatre Performance C301 and written permission of the Section. Continuation of Theatre Performance C301. Advanced study of special techniques for the theatre performer. (3 credits)

THEATRE PERFORMANCE C405
Directing II

Prerequisites: Theatre Performance C305 and written permission of the Section. Students will direct short plays for studio presentation. Lectures and independent research. (3 credits)

SCENOGRAPHY

SCENOGRAPHY C200
Design Studio

Prerequisite: Permission of the Section. An introduction to the basic theories and principles of visual design as applied to theatrical production. (6 credits) *NOTE A/See § 200.3*

SCENOGRAPHY C201
Stagecraft I

An introduction to the materials, equipment and techniques employed in scenery, properties, stage lighting instrumentation, and costumes for the theatre. (3 credits)

SCENOGRAPHY C202
Stagecraft II

Prerequisite: Scenography C201 (may be taken concurrently). A continuation of Scenography C201, including scene painting, the design and construction of stage properties, and theatre graphics. (3 credits) *NOTE A/See § 200.3*

SCENOGRAPHY C300
Scenic Design I

Prerequisites: Scenography C200 and C202. Studio work in the theory and practice of designing scenery for various types of theatrical productions with emphasis on the development of design concepts from script to stage and the techniques of presentation, including drafting, rendering, and model making. Consideration will be given to the history of architecture and décor and the development of various forms of theatre. (6 credits) *NOTE A/See § 200.3*

SCENOGRAPHY C301
Stagecraft III

Prerequisite: Scenography C202. Practice in the planning, organization, preparation and performance phases of theatrical production. Students will assume positions of responsibility in production management, stage management, technical direction and other major areas. (3 credits) *NOTE A/See § 200.3*

SCENOGRAPHY C302
Lighting and Sound

Prerequisite: Scenography C201. The technology and aesthetics of lighting and sound for the theatre. Students will assume positions of responsibility in theatre production. (3 credits)

SCENOGRAPHY C320
Costume Design I

Prerequisites: Scenography C200 and C201. A studio course in the theory and practice of designing costumes for various types of theatrical productions with emphasis on the development of design concepts and methods of presentation. Consideration will be given to the history of clothing and costume. (6 credits) *NOTE A/See § 200.3*

SCENOGRAPHY C321
Costume Construction

Prerequisite: Scenography C201. Practical work in the cutting and construction of stage costumes. Consideration will be given to the nature of fabrics and methods of handling them. Working from sketches, students will construct costumes for theatre productions. (3 credits)

SCENOGRAPHY C400
Scenic Design II

Prerequisites: Scenography C300 and C302. Practical work in the design and execution of scenery and lighting for theatrical production. (6 credits)

SCENOGRAPHY C401
Special Scenographic Techniques

Prerequisite: Scenography C202. Advanced practical work in areas such as masks, special make-up techniques, special effects, projected scenery, special properties construction techniques. (3 credits) *NOTE A/See § 200.3*

SCENOGRAPHY C420
Costume Design II

Prerequisites: Scenography C320 and C321 previously or concurrently. Practical work in the design and execution of costumes for theatrical production, including studio work in draping and flat pattern drafting. (6 credits)

81.11 Music

Associate Professor and Assistant Director Performing Arts, Music
P. COHEN

Associate Professor
S. FRIEDLAND

Assistant Professors
W. BOTTENBERG
A. CROSSMAN
L. DWYER

Lecturer
D. WALTER

81.11.1 PROGRAMMES

Students are responsible for fulfilling their particular degree requirements, hence the following sequences must be read in conjunction with § 81.3.

The superscript indicates credit value.

60 BFA Major in Music

0-6 Music C221[3], C222[3]
3-6 Music C230[6] or Music C231[3]
12 Integrative Music Studies C200[6], C310[6]
6 Chosen from Music History C301[3], C302[3], C303[3], C304[3], C401[3], C402[3]
30-39 Music Elective credits chosen in consultation with the Programme Adviser

30 Minor in Music

0-6 Music C221[3], C222[3]
6 Integrative Music Studies C200[6]
18-24 Music Elective credits chosen in consultation with the Programme Adviser

60 BFA Major in Fine Arts *

0-24 Music Section: Music Elective credits chosen in consultation with the programme adviser, Music
0-24 Studio Art Section: Studio Art Elective credits which may include Art C460[6]
0-24 Art History Section: Chosen from Art History C240[6], C339[6], C342[6], C343[6], C345[6], C443[6], C445[6]
0-24 Cinema Section: Chosen from Cinema C211[6], C212[6], C311[6], C312[6], C321[6], C322[6], C426[3], C427[3]
0-24 Theatre Arts Section: Chosen from Theatre Performance C201[3], C202[3], C203[3], C204[3], Scenography C200[6], C201[3], C202[3], C300[6], C320[6], Drama in Education C200[6], Theatre C201[3], C300[6], C301[3], C401[3]

** Credits must be taken in a minimum of 3 fields with a maximum of 24 credits in any single field.*

81.11.2 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.3

MUSIC

MUSIC C221
Theory/Aural Training I
A review of the fundamentals of music theory and aural training. Workshop and laboratory. (3 credits) *NOTE A/See § 200.3*

MUSIC C222
Theory/Aural Training II
Prerequisite: Music C221 or equivalent. Continuation of Music C221. (3 credits) *NOTE A/See § 200.3*

MUSIC C223
Understanding Music
A course in analytical listening for the student who has little or no musical background. The works studied represent the major styles and idioms of Western music. (3 credits) *NOTE A/See § 200.3*

MUSIC C230
Private Study B1
Prerequisite: Permission of the Music Section. This course offers individual or group instruction in an approved area of music with a qualified teacher of the student's choice. Students should understand that fees will vary with individual instructors. (6 credits) *NOTE A/See § 200.3*

MUSIC C231
Private Study A1
Prerequisite: Permission of the Music Section. This course offers individual or group

instruction in a approved area of music with a qualified teacher of the student's choice. Students should understand that fees will vary with individual instructors. (3 credits) *NOTE A/See § 200.3*

MUSIC C330
Private Study B II

Prerequisite: Music C230 and permission of the Music Section. Continuation of Music C230. (6 credits) *NOTE A/See § 200.3*

MUSIC C331
Private Study A II

Prerequisite: Music C231 and permission of the Music Section. Continuation of Music C231. (3 credits) *NOTE A/See § 200.3*

MUSIC C430
Private Study B III

Prerequisite: Music C330 and permission of the Music Section. Continuation of Music C330. (6 credits) *NOTE A/See § 200.3*

MUSIC C431
Private Study A III

Prerequisite: Music C331 and permission of the Music Section. Continuation of Music C331. (3 credits) *NOTE A/See § 200.3*

MUSIC C471
Independent Study

Prerequisite: Permission of the Section. An independent study intended primarily for the student who wishes to do research in an area of his own choice. He may alternatively elect to compose a large scale scale work or perform an approved programme in public recital. Staff members will be available for consultation. (3 credits) *NOTE C/See 200.3*

MUSIC C472
Independent Study

Prerequisite: Permission of the Music Section. Continuation of Music 471. (3 credits) *NOTE C/See 200.3*

CONTEMPORARY MUSIC STUDIES

CONTEMPORARY MUSIC STUDIES C300
Studio Music I

Prerequisite: Permission of the Music Section. A workshop programme in selected Jazz, Rock, Popular and related styles. The study will include ensemble playing, improvisation, score reading, jazz theory and arranging. Practice period/conference. (6 credits) *NOTE A/See § 200.3*

CONTEMPORARY MUSIC STUDIES C401
Studio Music II

Prerequisite: Contemporary Music Studies C300 or permission of the Music Section. An intensive study of selected problems in the development of studio musicianship. The areas covered are determined by specific class needs. Practice period/conference. (3 credits) *NOTE A/See § 200.3*

CONTEMPORARY MUSIC STUDIES C402
Studio Music III

Prerequisite: Contemporary Music Studies C401 or permission of the Music Section. Continuation of Contemporary Music Studies C401. (3 credits) *NOTE A/See § 200.3*

CONTEMPORARY MUSIC STUDIES C411
Seminar-Workshop in Composition I

Prerequisite: Permission of the Music Section. A Seminar-Workshop in one or more of the following: free composition; music for film, T.V., stage or mixed media; jazz, electronic, computer, aleatory, "brain" and experimental musics. Whenever possible, provisions will be made for public performance of student works. (3 credits) *NOTE A/See § 200.3*

CONTEMPORARY MUSIC STUDIES C412
Seminar-Workshop in Composition II

Prerequisite: Contemporary Music Studies C411. Continuation of Contemporary Music Studies C411. (3 credits) *NOTE A/See § 200.3*

CONTEMPORARY MUSIC STUDIES C413
Seminar-Workshop in Composition III

Prerequisite: Contemporary Music Studies C412. Continuation of Contemporary Music Studies C412. (3 credits) *NOTE A/See § 200.3*

CONTEMPORARY MUSIC STUDIES C414
Seminar-Workshop in Composition IV

Prerequisite: Contemporary Music Studies C413. Continuation of Contemporary Music Studies C413. (3 credits) *NOTE A/See § 200.3*

INTEGRATIVE MUSIC STUDIES

INTEGRATIVE MUSIC STUDIES C200
Theory/Composition/Analysis I

Prerequisite: Music C222 or equivalent. A workshop in theory, composition, analysis and related areas. The course will explore one or more traditional, contemporary or experimental approaches to the organization and uses of sound materials. Classroom and laboratory. (6 credits) *NOTE A/See § 200.3*

INTEGRATIVE MUSIC STUDIES C300
Theory/Composition II

Prerequisite: Integrative Music Studies C200 or equivalent. A study that coordinates exercises in part-writing and harmony with composition. Students work in a variety of traditional and contemporary forms, styles and media. Classroom and laboratory. (6 credits) *NOTE A/See § 200.3*

INTEGRATIVE MUSIC STUDIES C310
Aural Perception: Analytical Hearing I

Prerequisite: Music C222 or permission of the Music Section. A self-paced workshop in ear training. Hearing skills are developed through exercises in aural concentration, recall, reproduction, imagination, analysis and transcription. The sound materials used range from traditional to electronic, natural and mechanical. Classroom and laboratory. (6 credits) *NOTE A/See § 200.3*

INTEGRATIVE MUSIC STUDIES C321
Comparative Analysis I

Prerequisites: Twelve credits in Music or permission of the Music Section. A comparative study of selected works representing various forms, styles and historical periods. (3 credits) *NOTE A/See § 200.3*

INTEGRATIVE MUSIC STUDIES C322
Comparative Analysis II

Prerequisite: Integrative Music Studies C321. Continuation of Integrative Music Studies C321. (3 credits) *NOTE A/See § 200.3*

INTEGRATIVE MUSIC STUDIES C331
Instrumentation/Arranging I

Prerequisite: Permission of the Music Section. A study of the capabilities and uses of instruments in a variety of musical situations ranging from small ensembles to full orchestra. The areas covered are determined by class needs. Workshop and laboratory. (3 credits) *NOTE A/See § 200.3*

INTEGRATIVE MUSIC STUDIES C332
Instrumentation/Arranging II

Prerequisite: Integrative Music Studies C331. Continuation of Integrative Music Studies C331. (3 credits) *NOTE A/See § 200.3*

INTEGRATIVE MUSIC STUDIES C400
Theory/Composition III

Prerequisite: Integrative Music Studies C300 or equivalent. A continuation of Integrative Music Studies C300 at a more advanced level. While the study will emphasize contemporary writing techniques, it will include close work in traditional harmony and counterpoint. Classroom and laboratory. (6 credits) *NOTE A/See § 200.3*

INTEGRATIVE MUSIC STUDIES C411
Aural Perception: Analytical Hearing II

Prerequisite: Integrative Music Studies C310 or permission of the Music Section. An intensive study of selected problems in hearing, analyzing and transcribing music. The course combines individual and group exercises with structural analysis. Areas to be covered are determined by specific class needs. (3 credits) *NOTE A/See § 200.3*

INTEGRATIVE MUSIC STUDIES C412
Aural Perception: Analytical Hearing III

Prerequisite: Integrative Music Studies C411. Continuation of Integrative Music Studies C411. (3 credits) *NOTE A/See § 200.3*

INTEGRATIVE MUSIC STUDIES C421
Comparative Analysis III

Prerequisite: Integrative Music Studies C322. Continuation of Integrative Music Studies C322. (3 credits) *NOTE A/See § 200.3*

INTEGRATIVE MUSIC STUDIES C422
Comparative Analysis IV

Prerequisite: Integrative Music Studies C421. Continuation of Integrative Music Studies C421. (3 credits) *NOTE A/See § 200.3*

INTEGRATIVE MUSIC STUDIES C431
Instrumentation/Arranging III

Prerequisite: Integrative Music Studies C332. Continuation of Integrative Music Studies C332. (3 credits) *NOTE A/See § 200.3*

INTEGRATIVE MUSIC STUDIES C432
Instrumentation/Arranging IV

Prerequisite: Integrative Music Studies C431. Continuation of Integrative Music Studies C431. (3 credits) *NOTE A/See § 200.3*

MUSIC HISTORY

MUSIC HISTORY C200
Music History and Society

A survey of musical styles in their social context, from pre-history to the present day. While emphasis is on the mainstream of the western tradition, attention is also given to folk, popular and jazz styles, as well as the music of other cultures. (6 credits) *NOTE A/See § 200.3*

MUSIC HISTORY C301
Medieval/Renaissance Music

Prerequisite: Integrative Music Studies C200 or equivalent. Representative works from the Medieval and Renaissance periods. Styles and performance practices will be examined in the light of the historical forces that helped shape the course of Western Music. (3 credits)

MUSIC HISTORY C302
Music of the Baroque

Prerequisite: Integrative Music Studies C200 or equivalent. Representative works from the early 17th to the mid 18th century. The evolution of "common practice" will be traced in the forms, styles and performance practices of the great masters and schools. (3 credits)

MUSIC HISTORY C303
Classical Music

Prerequisite: Integrative Music Studies C200 or equivalent. Representative works from the age of Haydn, Mozart and Beethoven. Styles, forms and performance practices will be examined within the context of 18th century social and cultural developments. (3 credits)

MUSIC HISTORY C304
Romanticism in Music

Prerequisite: Integrative Music Studies C200 or equivalent. Representative works from the late 18th to early 20th century. Styles and performance practices will be studied as expressions of the romantic consciousness. (3 credits)

MUSIC HISTORY C305
Music in the Twentieth Century

Prerequisite: Integrative Music Studies C200 or equivalent. A selected area or movement in 20th century music. In a given semester the topic for consideration may include the work of a major composer, a national school, contemporary classicism, serialism, jazz, folk, popular, electronic, aleatory or experimental music. (3 credits)

MUSIC HISTORY C401
Special Study in Music History I

Prerequisite: 12 credits in Music and permission of the Music Section. A study of a selected period, area or contribution. In a given year, the study may examine any significant aspect of Western, non-Western or other musics. (3 credits) *NOTE A/See § 200.3*

MUSIC HISTORY C402
Special Study in Music History II

Prerequisite: Music History C401. Continuation of Music History C401. (3 credits) *NOTE A/See § 200.3*

MUSIC IN EDUCATION

MUSIC IN EDUCATION C300
Music for Classroom Use

Prerequisite: Permission of the Music Section. This course is designed to give the student a working knowledge of contemporary techniques of group instruction in music. At least one established or experimental method is covered in some depth; for example, Orff, Kodaly, Dalcroze, Martentot, Schafer, Dennis. While the main emphasis is on the cultivation of musicality in the pre-school and elementary school child, the implications for music education in general are also explored. Classroom work includes opportunities for demonstration and practice teaching. (6 credits) *NOTE A/See § 200.3*

MUSIC IN EDUCATION C431
Seminar-Workshop in Music Education I

Prerequisite: Permission of the Music Section. A study of selected problems in the musical education of the child. Among the areas to be considered are the music curriculum, music and the other arts, concepts of musicality, musical thinking, the education of the musically gifted child, and the musical environment in home and school. Discussion will

be combined with workshop demonstrations. (3 credits) *NOTE A/See § 200.3*

MUSIC IN EDUCATION C432
Seminar-Workshop in Music Education II

Prerequisite: Music in Education C431. Continuation of Music in Education C431. (3 credits) *NOTE A/See § 200.3*

MUSIC PERFORMANCE STUDIES

MUSIC PERFORMANCE STUDIES C201
Choir/Orchestra I

Prerequisite: Permission of the Music Section. Students may, on approval, receive credit for participation in the Faculty choir and/or orchestra. Credit is also available for participation in other approved choral or orchestral groups. (3 credits) *NOTE A/See § 200.3*

MUSIC PERFORMANCE STUDIES C301
Choir/Orchestra II

Prerequisite: Music Performance Studies C201. Continuation of Music Performance Studies C201. (3 credits) *NOTE A/See § 200.3*

MUSIC PERFORMANCE STUDIES C302
Choir/Orchestra III

Prerequisite: Music Performance Studies C301. Continuation of Music Performance Studies C301. (3 credits) *NOTE A/See § 200.3*

MUSIC PERFORMANCE STUDIES C311
Early Music Ensemble I

Prerequisite: Permission of the Music Section. A study, through performance, of representative vocal and instrumental works from the middle ages to the early baroque. (3 credits) *NOTE A/See § 200.3*

MUSIC PERFORMANCE STUDIES C312
Early Music Ensemble II

Prerequisite: Music Performance Studies C311. Continuation of Music Performance Studies C311. (3 credits) *NOTE A/See § 200.3*

MUSIC PERFORMANCE STUDIES C321
Traditional/Contemporary Ensemble I

Prerequisite: Permission of the Music Section. A study, through performance, of selected works from the traditional and contemporary repertoires. The works studied are determined by class needs and the particular skills of each student. (3 credits) *NOTE A/See § 200.3*

MUSIC PERFORMANCE STUDIES C322
Traditional/Contemporary Ensemble II

Prerequisite: Permission of the Music Section. Continuation of Music Performance Studies C321. (3 credits) *NOTE A/See § 200.3*

MUSIC PERFORMANCE STUDIES C411
Early Music Ensemble III

Prerequisite: Music Performance Studies C312. Continuation of Music Performance Studies C312. (3 credits) *NOTE A/See § 200.3*

MUSIC PERFORMANCE STUDIES C412
Early Music Ensemble IV

Prerequisite: Music Performance Studies C411. Continuation of Music Performance Studies C411. (3 credits) *NOTE A/See § 200.3*

MUSIC PERFORMANCE STUDIES C421
Advanced Repertoire I

Prerequisite: Permission of the Music Section. An intensive study of selected works from the repertoire. Particular consideration will be given to acquiring proficiency in conducting, balance, style, interpretation and related dimensions of higher technique. (3 credits) *NOTE A/See § 200.3*

MUSIC PERFORMANCE STUDIES C422
Advanced Repertoire II

Prerequisite: Permission of the Music Section. Continuation of Music Performance Studies C421. (3 credits) *NOTE A/See § 200.3*

MUSIC PERFORMANCE STUDIES C431
Seminar-Workshop in Performance I

Prerequisite: Permission of the Music Section. This course examines selected problems in the development of performance skills. The areas covered are, whenever possible, determined by the specific interests of students. Topics, in any given year, may include: technique; practice; style; interpretation; accompaniment; ensemble; teaching children; the adult student. (3 credits) *NOTE A/See § 200.3*

MUSIC PERFORMANCE STUDIES C432
Seminar Workshop in Performance II

Prerequisite: Music Performance Studies C431 previously or concurrently. Topics will vary between sections and also from year to year. Continuation of Music Performance Studies C431. (3 credits) *NOTE A/See § 200.3*

MUSIC PERFORMANCE STUDIES C433
Seminar Workshop in Performance III

Prerequisite: Music Performance Studies C432 previously or concurrently. Topics will vary between sections and also from year to year. Continuation of Music Performance Studies C432. (3 credits) *NOTE A/See § 200.3*

MUSIC PERFORMANCE STUDIES C434
Seminar-Workshop in Performance IV

Prerequisite: Music Performance Studies C433 previously or concurrently. Topics will vary between sections and also from year to year. Continuation of Music Performance Studies C433. (3 credits) *NOTE A/See § 200.3*

WORLD MUSIC

WORLD MUSIC C300
Folk Music of the Americas

Prerequisite: Permission of the Music Section. A survey of the roots and development of traditional music in the New World. The study exmaines aboriginal as well as transplanted and hybrid styles; urban and rural musics with special attention to European and African antecedents; the relationship of folk musics to popular and cultivated styles; transcription and arrangement, ethnomusicological method. (6 credits) *NOTE A/See § 200.3*

WORLD MUSIC C310
Music in the Non-Western World

Prerequisite: Permission of the Music Section. A survey of the art, religious and folk music of non-European cultures. The study includes an examination of cross-cultural parallels and influences, instruments, notations, textures, techniques of performance and problems of interpretation. Illustrated with recordings and slides (6 credits) *NOTE A/See § 200.3*

WORLD MUSIC C320
Folk and Traditional Music I

Prerequisite: Permission of the Music Section. The music of a selected culture or community. While in a given year the study may consider the music of any world culture, particular attention will be given to the musical heritage of ethnic minorities residing in Canada. (6 credits) *NOTE A/See § 200.3*

WORLD MUSIC C330
Folk and Traditional Music II

Prerequisite: Permission of the Music Section. Continuation of World Music C320. (6 credits) *NOTE A/See § 200.3*

WORLD MUSIC C340
Folk and Traditional Music III

Prerequisite: Permission of the Music Section. Continuation of World Music C330. (6 credits) *NOTE A/See § 200.3*

91 Sir George Williams Faculty of Science

Table of Contents

91.1 SGW FACULTY OF SCIENCE
91.2 ADMISSION REQUIREMENTS
91.3 DEGREE REQUIREMENTS
91.4 PROGRAMMES OF STUDY
91.5 FACULTY ADVISERS
91.6 DEPARTMENT OF BIOLOGICAL SCIENCES
91.7 DEPARTMENT OF CHEMISTRY
91.8 COMPUTER SCIENCE
91.9 ECONOMICS
91.10 DEPARTMENT OF GEOGRAPHY
91.11 DEPARTMENT OF GEOLOGY
91.12 DEPARTMENT OF MATHEMATICS
91.13 DEPARTMENT OF PHYSICS
91.14 PSYCHOLOGY (BSc)
91.15 TEACHING OF SCIENCE

91.1 Sir George Williams Faculty of Science

Dean
ROGER H. C. VERSCHINGEL

Assistant Dean
LEONDA S. ADLER

91.2 Admission Requirements

General Admission requirements are listed in § 13.

Specific requirements are those contained in the CEGEP pre-science profiles. They are outlined in the following tables:

Department	Profile
Biological Sciences	2.2 or 1.4
Chemistry	2.2 or 1.4
Geography	2.24
Geology	2.24
Mathematics	2.3
Mathematics (BA)	2.12
Physics	2.3
Psychology (BSc)	3.9

Profile	Subjects
2.2 or 1.4	Math 103, 203 Phys 101, 201, 301 or 102, 202, 302 Chem 101, 201 Bio 301 or 921
2.3	Math 103, 105, 203 Phys 101, 201, 301 or 102, 202, 302 Chem 101, 201 Bio 301 or 921
2.12	Math 103, 105, 203
2.24	Math 103, 203 Phys 101, 201, 301 or 102, 202, 302 Chem 101, 201 Bio 301 or 921 or Geol 901
3.9	Math 103, 203 Bio 301 or 921 Psyc 101, 201

91.3 Degree Requirements

Students preparing for the degree of Bachelor of Science will take the minimum of 90 credits. Each credit represents a minimum of 45 hours spread across the total student activity including lectures, conferences, laboratories, studio or practice periods, examinations and personal work. Sixty (60) of these must be taken from the courses listed as courses offered in the Faculty of Science in the university calendar except where otherwise noted.

91.4 Programmes of Study

Students may choose to follow in their degree requirements various programmes of study. These programmes are classified as Honours degrees, degrees with a Specialization, degrees with a Major, degrees with a Minor, and Certificates.

An **Honours** degree consists of a minimum of 60 specified credits and indicates an in depth specialization within a field of study and high academic standing. In order to qualify for an Honours degree a student must meet all the academic qualifications and comply with the regulations set forth in § 16.2.4.

A **Specialization** will consist of a minimum of 60 credits of an approved sequence of courses in a specific field. The term Specialization, BSc, implies that a student has followed, within the requirements for the degree, a planned programme of concentration in a given field of study.

A **Major** programme consists of a minimum of 36 credits of an approved sequence of courses in a specific or related field. Note: This programme differs from the old major which had a minimum of 42 credits and a maximum of 60 credits.

A **Minor** programme consists of a minimum of 24 credits and indicates a lower degree of concentration.

Students may choose to follow various combinations of these programmes within their degree requirements and are required

to indicate on their application forms the choice of Honours, Specialization or Major and any Minor.

Certificate programmes are available for practising teachers: Certificates in Mathematics for Teachers (Elementary School level) (Junior Secondary School level) and a Certificate in the Teaching of Science (Elementary School level).

There are also three Certificates in Scientific Measurement: Biology, Chemistry and Physics Options.

The content of these programmes for each department can be found with the departmental listings on the following pages.

91.5 Faculty Advisers

Biological Sciences
E. J. MALY (Honours)
S. S. ASHTAKALA
M. HERRINGTON
C. F. MACLEOD

Chemistry
T. ADLEY
M. J. KORNBLATT (Biochemistry)

Geography (BSc)
M. MARSDEN

Geology
A. DELAND
H. deROMER
S. KUMARAPELI

Mathematics
M. A. MALIK (Honours and Specialization)
J. SENEZ (Major)

Applied Mathematics
M. A. MALIK (Honours and Specialization)
J. SENEZ (Major)

Statistics
M. A. MALIK (Honours and Specialization)
J. SENEZ (Major)

Mathematics Certificates
M. A. BOSWALL (Elementary)
MARY A. BRIAN (Junior Secondary)

All Minor Programmes in Mathematics
H. W. PROPPE

Physics
A. L. KIPLING
S. K. MISRA

Psychology (BSc)
P. SHIZGAL

91.6 Department of Biological Sciences

Associate Professor and Chairman of the Department
HILDEGARD E. ENESCO

Professor
DONALD L. PEETS

Associate Professors
P. D. ANDERSON
S. S. ASHTAKALA
R. K. IBRAHIM
GÉRARD LEDUC
RUTH L. LOWTHER
C. F. MACLEOD
E. B. NEWMAN
ROBERT M. ROY
SYLVIA M. RUBY

Assistant Professors
M. HERRINGTON
J. A. KORNBLATT
E. J. MALY
E. PREDDIE

Postdoctoral Fellow
SYLVIA D'APPOLONIA

91.6.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 91.3, 91.4.

The superscript indicates credit value.

78 BSc Honours in Biological Sciences

Year I
21 * Bio N-202[3], N-203[3], N-204[3], N-213[3], N-224[3], Chem N-231[6]
Years II and III
21 Bio N-343[3], N-380[3], N-433[3], N-490[6], Chem N-371[6]
3 Chosen from Bio N-253[3], N-360[3], Zoo N-212[3]
3 Chosen from Bot N-231[3], Zoo N-215[3]
6 Bot N-320[3], N-360[3]; or Zoo N-320[6]
24 Credits from the field of Biological Sciences or related fields chosen in consultation with the Department.

**Students entering university with CEGEP Biology 401 will be granted an exemption for Biology N-202 but must substitute 3 credits from the Department of Biological Sciences.*

60 BSc Specialization in Biological Sciences

Year I
21 * Bio N-202[3], N-203[3], N-204[3], N-213[3], N-224[3], Chem N-231[6]
15 Bio N-343[3], N-380[3], N-433[3], Chem N-371[6]
3 Chosen from Bio N-253[3], N-360[3], Zoo N-212[3]
3 Chosen from Bot N-231[3], Zoo N-215[3]
6 Chosen from Bot N-320[3], N-360[3], or Zoo N-320[6]
12 Credits from the Department of Biological Sciences or in a related field chosen in consultation with the Department.

**Students entering university with CEGEP Biology 401 will be granted an exemption for Biology N-202 but must substitute 3 credits from the Department of Biological Sciences.*

36 BSc Major in Biological Sciences

21 Bio N-203[3], N-204[3], N-213[3], N-224[3], N-343[3], Chem N-231[6]
3 Chosen from Bot N-231[3], Zoo N-215[3]
3 Chosen from Bio N-253[3], N-360[3], Zoo N-212[3]
6 Bot N-320[3], N-360[3], or Zoo N-320[6]
3 Chosen from Bio N-380[3], N-433[3]

36 BSc Major in Botany

21 Bio N-204[3], Bot N-210[3], N-231[3], N-320[3], N-360[3], Chem N-231[6]
15 Chosen from Bio N-213[3], N-254[3], N-343[3], N-373[3], N-380[3], N-461[3], Bot N-213[3], N-215[3], N-216[3], N-311[3], N-421[3], N-422[3]

36 BSc Major in Environmental Biology

21 Bio N-203[3], N-204[3], N-213[3], N-312[3], N-313[3], N-380[3], Int St S221[3]
15 Chosen from Bio N-253[3], N-254[3], N-310[3], N-314[3], N-373[3], N-381[3], N-416[3], Bot N-210[3], N-216[3], N-421[3], Chem N-231[6], Zoo N-212[3]

36 BSc Major in Cell and Molecular Biology

21 Bio N-224[3], N-343[3], N-433[3], Chem N-231[6], N-371[6]
15 Chosen from Bio N-253[3], N-360[3], N-380[3], N-434[3], N-435[3], N-445[3], N-446[3], Chem N-471[6], N-472[6]

36 BSc Major in Zoology

21 Bio N-203[3], Zoo N-212[3], N-215[3], N-320[6], Chem N-231[6]
15 Chosen from Bio N-213[3], N-343[3], N-372[3], N-373[3], Zoo N-213[3], N-214[3], N-331[3], N-332[3], N-361[3], N-423[3], Chem N-371[6]

24 Minor in Biological Sciences

21 Bio N-203[3], N-204[3], N-213[3], N-224[3], N-343[3], Chem N-231[6]
3 Chosen from Bio N-253[3], N-360[3], N-380[3], N-433[3], Bot N-231[3], N-320[3], N-360[3], Zoo N-215[3], N-320[6]

24 Minor in Botany

21 Bio N-204[3], Bot N-210[3], N-231[3], N-320[3], N-360[3], Chem N-231[6]
3 Chosen from Bio N-213[3], N-254[3], N-343[3], N-373[3], N-380[3], Bot N-213[3], N-215[3], N-216[3], N-311[3], N-421[3], N-422[6]

24 Minor in Environmental Biology

21 Bio N-203[3], N-204[3], N-213[3], N-312[3], N-313[3], N-380[3], Int St S221[3]
3 Chosen from Bio N-253[3], N-254[3], N-310[3], N-314[3], N-373[3], N-380[3], N-381[3], N-416[3], Bot N-210[3], N-216[3], N-421[3], Chem N-231[6], Zoo N-212[3]

24 Minor in Cell and Molecular Biology

21 Bio N-224[3], N-343[3], N-433[3], Chem N-231[6], N-371[6]
3 Chosen from Bio N-253[3], N-360[3], N-380[3], N-434[3], N-435[3], N-445[3], N-446[3], Chem N-471[6], N-472[6]

24 Minor in Zoology

21 Bio N-203[3], Chem N-231[6], Zoo N-212[3], N-215[3], N-320[6]
3 Chosen from Bio N-213[3], N-343[3], N-372[3], N-373[3], Chem N-371[6], Zoo N-213[3], N-214[3], N-331[3], N-332[3], N-361[3], N-422[3]

24 Minor in Life Sciences

21 Bio N-203[3], N-204[3], N-213[3], N-241[6], Int St S221[3], S222[3]
3 Chosen from Bio N-255[3], Bot N-213[3]

32 Certificate in Scientific Measurement (Biology Option)

12 Bio N-202[3], N-203[3], N-380[3], N-381[3]
6 Chem N-352[3], N-354[3]
14 Phys N-295[4], N-396[5], N-397[5]

91.6.2 COURSE DESCRIPTIONS

BIOLOGY

BIOLOGY N-201 (251)
General Biology I

A survey of basic principles of Biology: chemical basis of life, cell organization and control; elements of anatomy, physiology, morphogenesis, heredity and evolution. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4. Science Students may not take this course for Science credits.*

BIOLOGY N-202 (252)
General Biology II

Prerequisite: CEGEP Biology 301 or equivalent. Cell biology, elementary biochemistry, developmental biology, physiology and genetics. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4.*

BIOLOGY N-203 (253)
Animal Biology

Prerequisite: CEGEP Biology 301 or equivalent. A survey of the major evolutionary trends in the animal kingdom. The integration of systems in relation to animal life will be stressed. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

BIOLOGY N-204 (254)
Plant Biology

Prerequisite: CEGEP Biology 301 or equivalent. A survey of the major evolutionary trends in the plant kingdom. The integration of structure and function in relation to plant growth and evolution will be stressed. Lectures and laboratory. (3 credits)

BIOLOGY N-213 (453)
Fundamentals of Ecology

Prerequisite: CEGEP Biology 301 or equivalent. An introduction to the basic principles of ecology dealing with the most important components of ecosystems. The course illustrates how environmental factors determine the distribution and abundance of plants and animals in various aquatic and terrestrial biomes of the world. Lectures only. (3 credits)

BIOLOGY N-224 (444)
Cell Physiology

Prerequisites: CEGEP Biology 401 or Biology N-202 and Chemistry N-231, previously or concurrently. A survey of the mechanisms involved in the normal function of single cells and subcellular components, particularly organelles as well as their responses to environmental stress. Lectures and laboratory. (3 credits)

BIOLOGY N-241 (241)
Genetics and Human Welfare

A course on the principles of heredity as understood by modern biology. It deals also with the application of genetic principles to organisms, including man. The biological basis of social problems is dealt with at some length. Organic evolution and its implications for human life and welfare are considered. Lectures only. (6 credits) *NOTE: No Science credits will be given for Biology N-241 if it is taken concurrently with or following Biology N-343.*

BIOLOGY N-253 (428)
Biology of Bacteria and Viruses

Prerequisite: CEGEP Biology 301 or equivalent. An introduction to theoretical and applied aspects. The physiology of bacteria and viruses as related to industrial, health, agricultural and ecological considerations is discussed. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

BIOLOGY N-254 (429)
Biology of the Fungi

Prerequisite: CEGEP Biology 301 or equivalent. A study of selected species from representative groups including their occurrence, lifecycles and growth requirements. In lectures, stress is placed on their activities — in the cycling of elements in nature, in damage to

agricultural crops and forests, in food spoilage, as human pathogens, as industrial agents, as research tools, and as sources of food and drugs. Laboratories are mostly descriptive using Canadian collections. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

BIOLOGY N-255 (242)
Microorganisms and Man

Prerequisite: High School Biology or equivalent. A public awareness course designed to supply basic information to non-biologists. Attempts to control continuing and recent problems due to microscopic forms as causal agents in human and plant disease, spoilage of food, wood, petroleum products and water pollution. Their beneficial activities in nature and their use in the production of drugs and foods are also considered. Lectures only. (3 credits) *NOTE: Science Students may not take this for Science credits.*

BIOLOGY N-310
Field and Laboratory Ecology

Prerequisite: Biology N-213 and permission of the instructor. An introduction to the methods of qualitative and quantitative studies of aquatic and terrestrial ecosystems. Students gain experience in techniques of field investigation. Weekend field trips and laboratory work. (3 credits)

BIOLOGY N-312
Intermediate Ecology

Prerequisite: Biology N-213. An in depth analysis of factors affecting distribution and abundance of plants and animals. Environmental physiology, adaptations of plants and animals to physical conditions, population structures and behaviour patterns as responses to the physical environment will be discussed. Lectures only. (3 credits)
NOTE: Students who have taken Botany N-313 or Zoology N-313 for credit may not enrol in this course.

BIOLOGY N-313
Population Ecology

Prerequisite: Biology N-312. A theoretical approach to ecological problems. Evolutionary aspects of ecological problems, population dynamics, species diversity, stability of ecosystems, regulation of population size, competition, and predation. Lectures only. (3 credits)

BIOLOGY N-314 (454)
Fundamentals of Limnology

Prerequisite: Biology N-213, previously or concurrently. An introduction to the study of freshwater ecosystems with major emphasis on geographical, physical and chemical characteristics. The major topics include the origin of lake basins, lake morphology and morphometry, wave and currents, the optical and thermal properties of lakes, dissolved chemicals. Some aspects of water pollution are considered. Lectures only. (3 credits)

BIOLOGY N-343 (445)
Genetics

Prerequisite: CEGEP Biology 401 or Biology N-202. A course to illustrate the fundamental principles of inheritance in plants, animals and microorganisms. Mendelian genetics, gene linkage and mutation will be covered. The role of DNA as the hereditary material and genetic code will be studied in detail, as will the mechanisms of DNA, RNA and protein synthesis. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

BIOLOGY N-344 (446)
Genetics of Higher Organisms

Prerequisite: Biology N-343. This course will cover various aspects of the genetics of multicellular and eukaryotic organisms, including cytogenetics, developmental, human, behavioural and population genetics, as well as somatic cell genetics. Lectures only. (3 credits) *NOTE A/See § 200.4*

BIOLOGY N-350
Immunology

Prerequisites: Biology N-224, N-343, and Chemistry N-231; Chemistry N-371, previously or concurrently. A course in modern immunology stressing the following areas of study: the structure and properties of antigens and antibodies; the nature of the immune response; cellular antibody synthesis; genetic aspects of antibody synthesis; theories relating antibody specificity to genetic potential. Lectures and conference. (3 credits)

BIOLOGY N-351
Nutrition

Prerequisites: Biology N-224 and Chemistry N-231, previously or concurrently. The concept of a balanced diet will be studied in relation to calorie content, and to protein, lipid, carbohydrate, vitamin and mineral requirements. The consequences of dietary deficiencies will be examined. Special topics such as dieting, organic foods and megavitamins will be discussed and evaluated. Lectures only. (3 credits)

BIOLOGY N-356
Microbial Physiology

Prerequisites: Biology N-253, Chemistry N-371, previously or concurrently, or permission of the instructor. A study of the biochemical activities underlying the life of microorganisms to survey the diverse patterns used by microorganisms in energy metabolism and biosynthesis. Applications of theoretical knowledge to industrial microbiology, including fermentation and antibiotic production will be examined. Lectures and conference. (3 credits)

BIOLOGY N-360 (460)
Developmental Biology

Prerequisite: Second year standing in Biological Sciences. A study of the molecular aspects of development in animal and plant cells in relation to the acquisition of form. Lectures only. (3 credits)

BIOLOGY N-372 (481)
History of Biology

Prerequisites: Any 12 credits from the Department of Biological Sciences. A course following the growth of Biological Sciences. Lectures only. (3 credits) *NOTE A/See § 200.4*

BIOLOGY N-373 (484)
Evolution

Prerequisites: Any 12 credits from the Department of Biological Sciences. A course to examine the concepts leading from Darwin's Theory to a modern synthesis of evolution. Lectures only. (3 credits) *NOTE A/See § 200.4*

BIOLOGY N-380 (482)
Biostatistics I

Prerequisites: Any 12 credits from the Department of Biological Sciences. Application of statistical methods to biological data. Descriptive statistics. Binomial, Poisson and Normal distributions. Confidence limits. Tests of significance. Introduction to analysis of variance, correlation and regression. Analysis of frequencies. Lectures and laboratory. (3 credits)

BIOLOGY N-381 (483)
Biostatistics II

Prerequisite: Biology N-380. Sampling methods. Analysis of variance and experimental design. Regression and correlation techniques. Bioassay. Non-parametric statistics. Analytical methods in field biology/genetics and microbiology. Lectures and laboratory. (3 credits)

BIOLOGY N-416 (456)
Aquatic Ecology and Water Pollution

Prerequisite: Biology N-314. An inquiry into factors governing the distribution and abundance of aquatic organisms in lakes and streams, with emphasis on the nature and significance of the responses of aquatic organisms and communities through changes in water quality with pollution, on sources and types of pollutants and on methods of evaluating pollution and treating wastes. Lectures only. (3 credits)

BIOLOGY N-421
Advanced Cell Physiology

Prerequisites: Biology N-224, Chemistry N-371 previously or concurrently. Lectures and seminars dealing with selected topics in cell physiology, emphasizing a molecular and experimental approach. Lectures only. (3 credits)
NOTE: Students who have taken Zoology N-422 for credit may not take Biology N-421 for credit.

BIOLOGY N-433 (443)
Cytology

Prerequisites: CEGEP Biology 401 or Biology N-202 and Chemistry N-231. Cell structure of both plants and animals, with special reference to genetics. Emphasis is on experimental, molecular and ultrastructure analysis, to achieve a correlation between cell structure and function. Lectures and laboratory. (3 credits)

BIOLOGY N-434 (434)
Radiation Biology and Radiotracer Methodology I

Prerequisites: Biology N-224, previously or concurrently, second or third year standing. A survey of the elements of radiation physics with emphasis on the properties of ionizing radiation and its interaction with matter including dosimetry and methods of radiation counting. The effects of radiation at the macromolecular, cellular and organismal level will be considered from both the somatic and genetic points of view. Lectures and laboratory. (3 credits)

BIOLOGY N-435 (435)
Radiation Biology and Radiotracer Methodology II

Prerequisite: Biology N-434. A detailed study of selected topics in chemical and solid state dosimetry, liquid scintillation counting, neuron irradiation techniques, cell kinetics, target theory, radiation botany and mammalian radiobiology. Laboratory will emphasize the use of a wide range of radioisotopes and radiation sources. A visit to a major radiation lab or reactor will be arranged. Lectures and laboratory. (3 credits)

BIOLOGY N-445 (447)
Biological Regulatory Mechanisms

Prerequisites: Biology N-343, Chemistry N-371 previously or concurrently, or permission of the instructor. Metabolic pathways with an emphasis on their control and coordination; intercellular messengers in developmental and adult systems. Lectures and conference. (3 credits)

BIOLOGY N-446 (448)
Molecular Genetics

Prerequisites: Biology N-343, Chemistry N-371, previously or concurrently, or permission of the instructor. Basic microbial and molecular genetics including mechanisms in protein synthesis; bacteriophage recombination. Use of genetics in the study of regulation of gene expression, the code and mechanisms in protein synthesis; bacteriophage genetics; episomes. Lectures and conference. (3 credits)

BIOLOGY N-461
Horticultural Science

Prerequisite: Biology N-204 and permission of the instructor. The scientific concepts of horticulture are emphasized. The subject material is organized in three main categories: Biology of Horticulture, Technology of Horticulture, and Industry of Horticulture; and includes topics of current interest such as: breeding crops for adaptation to any climate; chemical regulation of plant processes and effect on crop yield; environmental factors in crop production; pollutant impact on horticulture; bulk storage and processing and marketing of perishables. The role of horticultural science in meeting world food requirements as well as its impact on sociosphere are discussed. Lectures only. (3 credits)

BIOLOGY N-490 (491)
Special Study

Prerequisites: Third year standing and permission from the Chairman of the Department or his representative. In this course, the student undertakes a special research project to develop his knowledge of scientific procedures as used by biologists. The project may include only library research or both library and experimental research. (6 credits) *NOTE: This course is required of Honours students in their final year. Other students may take this course with special permission of the department. All students planning to take this course must consult with the Department of Biological Sciences in their U-2 year to obtain permission to enrol.*

BOTANY

BOTANY N-210 (430)
Eastern North American Flora

Prerequisite: Biology N-204, previously or concurrently. A study of higher plant life occurring in Eastern North America, including the recognition, collection, identification, classification and distribution. Field work for practical experience with the regional flora in various habitats. Lectures and laboratory. (3 credits)

BOTANY N-213 (421)
Economic Botany

Prerequisite: CEGEP Biology 301 or equivalent. Origin, development and use of selected economic plants including microorganisms. Their historical impact, prospects for future use and importance to Canadian economy are stressed as well as world-wide problems of food and alimentation. Lectures only. (3 credits)

BOTANY N-215 (434)
Biology of Mosses and Lichens

Prerequisite: Biology N-204 previously or concurrently. A survey of these organisms including distribution, classification, morphology and anatomy — information on nutrient cycling, use as indicators of air pollution and use as a research tool. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

BOTANY N-216 (435)
Biology of Fresh Water and Marine Algae

Prerequisite: CEGEP Biology 301 or equivalent. A study of selected species from representative fresh-water and marine groups including their occurrence, life-cycles and growth requirements. Topics include their involvement — in polluted and non-polluted water systems, in sewage treatments, as primary producers in food chains, in the formation of natural habitats — as special research subjects as well as their increasing economic importance in industry and as food supplements. Laboratories are mostly descriptive, using Canadian collections. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

BOTANY N-231 (410)
Plant Anatomy

Prerequisite: Biology N-204. A study of the internal structure of the plant as related to the processes of growth and metabolism. An experimental approach is presented to the study of the relationship between structure and function of various parts of the plant. Includes pathological, ecological and economic aspects of anatomy with emphasis on developmental anatomy. Laboratory work includes preparation of permanent slides using plant microtechnique. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

BOTANY N-311
Plant Biosystematics

Prerequisite: Biology N-204. A study of modern systematics concerned with the application of experimental techniques in genetics, cytology, chemistry and statistics to the solution of questions relating to the classification of plants and their evolutionary sequences. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

BOTANY N-320 (431)
Plant Metabolism

Prerequisite: Chemistry N-231. A study of the physiological processes of higher plants related to nutrition and metabolism. Topics include: absorption and transport of water and mineral salts, mineral nutrition, photosynthesis, carbohydrate and nitrogen metabolism. Metabolic processes are discussed in relation to structure and environmental factors and some aspects of energy transformations and energy flow are included. Interrelations among the various metabolic processes are discussed. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

BOTANY N-360 (432)
Physiology of Plant Growth

Prerequisite: Botany N-320 previously or concurrently. A physiological and biochemical study of growth regulators, their mechanism of action and their role in plant growth and metabolism. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

BOTANY N-421
Physiology of Stress in Plants

Prerequisite: Botany N-320 or permission of the department. The physiological and molecular basis of plant response to various environmental stresses such as freezing, drought, soil toxicants, environmental pollutants and radiation effects are discussed.. The study of the control of such stresses and of the injuries they produce, resistance, tolerance and avoidance mechanisms that exist are discussed. Response of crop plants and effects on crop quality and crop yields are stressed. Lectures only. (3 credits)

BOTANY N-422 (418)
Plant Biochemistry

Prerequisite: Chemistry N-371 previously or concurrently, or permission of the instructor. Biochemical study of natural constituents and secondary metabolites unique to plants; their biosynthesis and role in plant biology. Topics include, among others, plant cellwall components; unusual amino acids; plant pigments, terpenoids, steroids and alkaloids; phenolic compounds and flavonoid pigments; growth hormones and inhibitors. Lectures only. (6 credits)

ZOOLOGY

ZOOLOGY N-212
Invertebrate Zoology

Prerequisite: Biology N-203 previously or concurrently. An introductory course to the structure and function of the invertebrate phyla. Emphasis will be placed on evolutionary aspects. Laboratory work will include physiological experiments with living organisms. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

ZOOLOGY N-213 (424)
Parasitology

Prerequisite: Biology N-203 previously or concurrently. A survey of the parasitic groups of invertebrates with special reference to the parasites of man. Lectures and laboratory. (3 credits)

ZOOLOGY N-214 (425)
Entomology

Prerequisite: Biology N-203 previously or concurrently. An introduction to the study of insects, their morphology, taxonomy, physiology and ecology. Lectures and laboratory. (3 credits)

ZOOLOGY N-215 (422)
Chordate Anatomy

Prerequisite: Biology N-203. A study of the anatomy and evolutionary development of the major organ systems of the chordates. In the laboratory the lamprey, the mudpuppy, the turtle and the cat will be dissected. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

ZOOLOGY N-317
Biology of Fishes

Prerequisites: Biology N-213 and Zoology N-215. This introduction to fish biology will include a study of anatomy, physiology and classification of the major groups of fishes as well as their ecology and zoogeography. Emphasis will be placed on freshwater fishes. Lectures and laboratory. (3 credits)

ZOOLOGY N-320 (431)
Animal Physiology

Prerequisites: Biology N-203 and Chemistry N-231. A study of comparative animal physiology at the system level. Lectures and laboratory. (6 credits)

ZOOLOGY N-331 (473)
Fundamentals of Histology

Prerequisite: Biology N-203. A comparative study of the microscopic characteristics of cells, tissues and organs of the vertebrates. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

ZOOLOGY N-332 (474)
Comparative Vertebrate Histology

Prerequisite: Zoology N-331. An advanced comparative study of the vertebrate organ systems at the ultrastructural and histological level. Those registered will be expected to participate in a seminar. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

ZOOLOGY N-361 (462)
Vertebrate Embryology

Prerequisite: Zoology N-215 previously or concurrently. The fundamental processes of growth and development in the vertebrates. A comparative study is made of selected vertebrate species with emphasis on the experimental and molecular aspects. Lectures and laboratory. (3 credits)

ZOOLOGY N-422 (432)
Advanced Animal Physiology

This course is no longer offered. It has been replaced by Zoo N-423.

ZOOLOGY N-423
Advanced Animal Physiology

Prerequisite: Zoology N-320. Lectures and seminars dealing with selected topics in mammalian, comparative and environmental physiology. Lectures and seminars only. (3 credits)

This course was given in the summer of 1976.

BIOLOGY N-459

Endocrinology

(3 CREDITS)

91.7 Department of Chemistry

Associate Professor and Chairman of the Department
RODERICK E. TOWNSHEND

Professor and Dean of Science
ROGER H. C. VERSCHINGEL

Professors
LAWRENCE D. COLEBROOK
JAMES G. DICK
JOHN RUSSELL UFFORD

Associate Professors
THOMAS J. ADLEY
PETER H. BIRD
ZACHARIAS HAMLET
JACQUES LENOIR
ROBIN T. B. RYE
NICK SERPONE
OSWALD S. TEE
RONALD A. WESTBURY

Assistant Professor
MARY JUDITH KORNBLATT

91.7.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 91.3, 91.4

The superscript indicates credit value.

NOTE: The Order of Chemists of Quebec has fully accredited the curricula of i) Honours in Chemistry ii) Specialized Degree in Analytical Chemistry iii) Specialized Degree in Biochemistry iv) Specialized Degree in Chemistry. Upon satisfactory completion of any of the above programmes a graduate is eligible for membership in the Order. A working knowledge of French is required.

90 BSc Honours in Chemistry

Year I
24 Chem N-211[4], N-213[2], N-222[3], N-223[3], N-231[6], N-241[6]
6 Math N-270[6]
Year II
30 Chem N-311[3] (or N-411[3]), N-322[3], N-323[3], N-331[6], N-342[3], N-343[3], N-350[3], N-354[3], N-462[3]
Year III
30 Chem N-431[6], N-442[3], N-443[3], N-445[3], N-452[3], N-453[3], N-463[3], N-491[6]

NOTE: Students who have passed CEGEP Chemistry 202 may replace Chemistry N-231[6] with N-233[3].

60 BSc Specialization in Chemistry

Year I
24 Chem N-211[4], N-213[2], N-222[3], N-223[3], N-231[6], N-241[6]
Year II
21 Chem N-311[3] or N-411[3], N-331[6], N-342[3], N-343[3], N-350[3], N-354[3]
Year III
6 Chem N-323[3], N-445[3]
6 Chem 400 level credits
3 Chem credits (or in a related field with Departmental approval)

NOTE: Students who have passed CEGEP Chemistry 202 may replace Chemistry N-231[6] with N-233[3].

76 BSc Specialization in Biochemistry

Year I
18 Chem N-211[4], N-213[2], N-231[6], N-241[6]
6 Biological Sciences* credits
Year II
24 Chem N-331[6], N-342[3], N-343[3], N-350[3], N-352[3], N-371[6]
6 Biological Sciences credits*
Year III
6 Chem N-471[6] or N-472[6]
6 Chem credits*
6 Biological Sciences, Biophysics or Psych Elective credits*
4 Phys N-480[4]

* *In consultation with the Chemistry Department*

NOTE: Students who have passed CEGEP Chemistry 202 may replace Chemistry N-231[6] with N-233[3].

69 BSc Specialization in Analytical Chemistry

Year I
24 Chem N-211[4], N-213[2], N-222[3], N-223[3], N-231[6], N-241[6]
6 Comp Sc S211[3], S221[3]
Year II
24 Chem N-311[3], N-323[3], N-331[6], N-342[3], N-343[3], N-350[3] and N-354[3]
3 Comp Sc S216[3]
Year III
12 Chem N-411[3], N-419[6] and N-452[3]

NOTE: Students who have passed CEGEP Chemistry 202 may replace Chemistry N-231[6] with N-233[3]. Students who specialize in Analytical Chemistry are exempted from the corequisite Computer Science N-220[3] for N-310[3].

36 BSc Major in Chemistry

24 Chem N-211[4], N-213[2], N-222[3], N-223[3], N-231[6] and N-241[6]

12 chosen from Chem N-311[3], N-323[3], N-331[6], N-342[3], N-343[3], N-350[3], N-354[3] (Other courses may be selected in consultation with the Department.)

24 Minor in Chemistry *
24 Chem N-211[4], N-213[2], N-222[3], N-223[3], N-231[6] and N-241[6]

* *Other combinations may be arranged in consultation with the Department.*

24 Minor in Biochemistry
24 Chem N-231[6], N-350[3], N-352[3], N-371[6], N-471[6]

32 Certificate in Scientific Measurement (Chemistry Option)
18 Chem N-211[4], N-213[3], N-311[3] (or N-411[3]), N-352[3], N-354[3], N-453[3]
14 Phys N-295[4], N-396[5], N-397[5]

91.7.2 COURSE DESCRIPTIONS

CHEMISTRY N-201
General Chemistry I

States of matter. Atoms, elements and isotopes; atomic structures. The electronic structure of atoms. The Periodic Table and chemical bonding. Ions in solution. Lectures, tutorials and laboratories. (3 credits) *NOTE A/See § 200.4. Science Students may not take this course for Science credits.*

CHEMISTRY N-202
General Chemistry II

Prerequisite: Chem 201. Covalent compounds. Chemical reactions; mechanism and kinetics. Special topics: oriented either to the biological sciences, biochemistry and chemistry, or to the physical sciences, engineering and computer sciences. Lectures, tutorials and laboratories. (3 credits) *NOTE A/See § 200.4. Science Students may not take this course for Science credits.*

CHEMISTRY N-211 (412)
Introductory Quantitative Analysis

Prerequisites: CEGEP Chemistry 201; CEGEP Physics 301; CEGEP Mathematics 103 and 203; or equivalent courses. Chemical equilibrium as applied to volumetric and gravimetric procedures; general theory of volumetric titrations; titration curves; application of general titration theory to neutralization precipitation, complexation, oxidation-reduction and nonaqueous solvent titrations; theory of potentiometry and potentiometric titrations; theory of gravimetric analysis; methods of separation by chemical and physical means; electrogravimetry and electrolytic separations; absorptimetric theory and absorptimetric methods of analysis. Lectures and laboratory. Textbook: Dick: *Analytical Chemistry* (McGraw-Hill) (4 credits)

CHEMISTRY N-213 (413)
Statistical Treatment of Chemical Data

Prerequisites: CEGEP Chemistry 201; CEGEP Physics 301; CEGEP Mathematics 103 and 203; or equivalent courses. The statistical treatment of chemical data including: observations and measurements; error and accuracy; significant figures, expression of results; probability theory, normal and Poisson error distributions; precision; measures of spread; propagation of errors; rejection of observations; statistical analysis; graphical analysis; straight line law; nonlinear laws; method of least squares; accuracy of values derived from graphs; literature data, primary and secondary sources; use of chemical literature indices. Lectures only. (2 credits)

CHEMISTRY N-222
Introduction to Inorganic Chemistry

Prerequisites: CEGEP Chemistry 201; CEGEP Physics 301; CEGEP Mathematics 103 and 203; or equivalent courses. Atomic Structure, Chemical Bonding, Ionic Solids, Chemistry of Anions. Solvents, Solutions, Acids and Bases. The Periodic Table and Chemistry of the Elements (Summary). Lectures and Laboratory. Textbook: Cotton and Wilkinson: *Basic Inorganic Chemistry* (Wiley). (3 credits). *NOTE A/See § 200.4.*

CHEMISTRY N-223
Chemistry of the Main Group Elements

Prerequisites: CEGEP Chemistry 201, Physics 301, Mathematics 103 and 203; or equivalent courses. Descriptive Chemistry of: Hydrogen; Group IA Lithium to Cesium: Group IIA, Beryllium to Radium: Boron: Group IIIA, Aluminum to Thallium: Carbon: Group IVB, Silicon to Lead: Nitrogen: Group VB, Phosphorus to Bismuth: Oxygen: Group VIB, Sulphur to Polonium: The Halogens; The Noble Gases: Group IIB, Zinc, Cadmium and Mercury. Lectures and Laboratory. Textbook: Cotton and Wilkinson: *Basic Inorganic Chemistry* (Wiley). (3 credits). *NOTE A/See § 200.4.*

CHEMISTRY N-231 (421)
Introductory Organic Chemistry

Prerequisite: CEGEP Chemistry 201 or an equivalent course. Chemistry of aliphatic and aromatic compounds; structural isomerism; stereoisomerism; mechanisms; electronic theories and stereochemistry of organic reactions; applications of spectroscopy to organic chemistry. Lectures and laboratory. Textbook: *To be announced.* (6 credits)

CHEMISTRY N-233 (423)
Introductory Organic Chemistry

Prerequisites: One semester of organic chemistry at CEGEP level (CEGEP Chemistry 202). Reactions and syntheses of aliphatic and aromatic compounds. Mechanisms and electronic theories of organic reactions. Application of spectroscopy to organic chemistry. Lectures and laboratory. Textbook: *To be announced.* (3 credits) *NOTE A/See § 200.4*

CHEMISTRY N-241 (431)
Introductory Physical Chemistry

Prerequisites: CEGEP Chemistry 201; CEGEP Physics 301; CEGEP Mathematics 103 and 203; or equivalent courses. Real gases; kinetic molecular theory; equilibrium thermodynamics (first, second and third laws); electrochemical cells and the Nernst equation; applications of thermodynamics to one-component, two-component and three-component systems; chemical kinetics; ions in solution. Lectures only. Textbook: Daniels and Alberty: *Physical Chemistry* (Wiley, 4th ed) (6 credits)

CHEMISTRY N-281 (461)
Industrial Inorganic Chemistry

Prerequisite: CEGEP Chemistry 201 or an equivalent course. Study of selected industrial inorganic processes. This course is not applicable towards a major in Chemistry. Lectures only. Textbook: Shreve: *Chemical Process Industries* (McGraw-Hill, 3rd ed) (3 credits)

CHEMISTRY N-301 (401)
Chemical Pedagogy

Prerequisite: CEGEP Chemistry 201 or an equivalent course; one full laboratory course at university level. The methodology of teaching chemistry at various levels including: the objectives of chemical education; the presentation of chemical concepts; the communication skills; the mathematical skills; the editing of a course and its lectures; the philosophy of laboratory procedure; the examination; the textbook; planning and budgeting; visual aids. Lectures only. (6 credits)

CHEMISTRY N-311 (417)
Electrochemical Methods of Analysis

Prerequisites: Chemistry N-211, N-213. Coulometric theory; instrumentation; coulometry at controlled potential; coulometry at constant current; coulometric titrations. Review and extension of potentiometric theory covered in Chemistry N-211 (412); derivative titrations; two indicating electrode titrations; polarized titrations; automatic titrators. The theory of voltammetric and polarographic methods; the Ilkovic equations; rotating platinum electrode; instrumentation; application to qualitative and quantitative analysis; reversible and irreversible electrode reactions; kinetic and catalytic processes; amperometric titrations; chronopotentiometry and chronoamperometry; determination of reaction characteristics such as electron transfer, coordination number, rate constant, etc. Conductance theory and measurement; instrumentation; conductometric titrations by standard and high frequency methods. Lectures and laboratory. Textbook: Dick: *Analytical Chemistry* (McGraw-Hill) (3 credits)

CHEMISTRY N-322 (418)
Introduction to Symmetry and Group Theory

Prerequisites: Chemistry N-211, N-222, N-223; Chemistry N-350 previously or concurrently. Symmetry elements and symmetry operations; point groups; character tables; applications of group theory to Valence Bond, Crystal Field, and Molecular Orbital theory of bonding; applications to electronic spectroscopy and molecular vibrations. Lectures and laboratory. Textbooks: Cotton: *Chemical Applications of Group Theory* (Interscience, 2nd ed) Angelici: *Synthesis and Techniques in Inorganic Chemistry* (Saunders) (3 credits) *NOTE A/See § 200.4*

CHEMISTRY N-323 (419)
Chemistry of the Transitional Elements

Prerequisites: Chemistry N-211, N-222, N-223; Chemistry N-350 previously or concurrently. Coordination chemistry: structure, theory of bonding, reactivity of transition metal complexes of various coordination numbers. Descriptive chemistry of transition metals of various oxidation states. Organometallic chemistry. Inorganic chemistry in biological systems. Lectures and laboratory. Textbooks: Huheey: *Inorganic Chemistry — Principles of Structure and Reactivity* (Harper and Row) Angelici: *Synthesis and Techniques in Inorganic Chemistry* (Saunders) Reference Text: Cotton and Wilkinson: *Advanced Inorganic Chemistry* (Wiley, 3rd ed) (3 credits) *NOTE A/See § 200.4*

CHEMISTRY N-331 (427)
Intermediate Organic Chemistry

Prerequisites: Chemistry N-231, N-241; Chemistry N-350 previously or concurrently. Amplification of concepts presented in introductory organic chemistry; reaction mechanisms; catalysis; conformational analysis and stereochemistry. Laboratory includes qualitative analysis of compounds and mixtures by spectroscopic techniques; small scale preparations; selected experiments in physical organic chemistry. Lectures and laboratory. Textbook: *To be announced* (6 credits)

CHEMISTRY N-336 (471)
Natural Products I

Prerequisites: Chemistry N-231. Structure determination, stereochemistry and reactions of carbohydrates; synthesis, stereochemistry and physicochemical properties of amino-acids; determination of amino-acid sequences in, and, synthetic methods for, polypeptides; conformations of polypeptides and proteins. Lectures only. Textbook: Barker: *Organic Chemistry of Biological Compounds* (Prentice-Hall) (3 credits)

CHEMISTRY N-337 (473)
Natural Products II

Prerequisites: Chemistry N-231. The chemistry (structure determination, synthesis, stereochemistry) of various natural products is presented. Topics are selected from the following areas: purine and pyrimidine bases, nucleosides and nucleotides, nucleic acids, terpenes, lipids, steroid hormones, antibiotics, etc. Lectures only. Textbook: *To be announced.* (3 credits)

CHEMISTRY N-338 (472)
Chemistry of High Polymers I

Prerequisites: Chemistry N-231, N-241. Methods and mechanisms of polymer preparation; condensation polymerization; addition polymerization; ring opening reactions; vinyl and diene polymers; polyesters; polyamides; polythioethers; properties of polymers and their related monomers. Lectures only. Textbook: Lenz: *Organic Chemistry of Synthetic High Polymers* (Wiley) (3 credits)

CHEMISTRY N-339
Pharmacology I—Principles of Drug Action

Prerequisites: Chemistry N-231; Biology N-224 or Chemistry N-371. Passage of drugs across biological barriers. Mechanisms of drug action. Termination of drug action. Chemical pathways for drug metabolism. Factors modifying the effect of drugs. Evaluation of drug safety. Drug toxicity. Lectures only. (3 credits)

CHEMISTRY N-342 (436)
Chemical Kinetics

Prerequisite: Chemistry N-241. Topics in chemical kinetics and thermodynamics including mechanisms of elementary processes; reactions in the gas-phase and in solution; the Rice-Ramsperger-Kassel, and Slater theoretical treatments; Rice-Herzfeld mechanisms; applications of the foregoing treatments to selected systems; introduction to modern techniques for the study of very fast reactions. Lectures and laboratory. Textbooks: Laidler: *Chemical Kinetics* (McGraw-Hill, 2nd ed) Daniels, et al: *Experimental Physical Chemistry* (McGraw-Hill, 7th ed) (3 credits) *NOTE A/See § 200.4*

CHEMISTRY N-343 (437)
Intermediate Thermodynamics

Prerequisite: Chemistry N-241. Mathematical treatment of mixtures of real gases; partial molar properties; fugacities and activities; determination of activities of nonelectrolytes and electrolytes. Lectures and laboratory. Textbooks: Denbigh: *Principles of Chemical Equilibrium* (C.U.P. 3rd ed) Daniels, et al: *Experimental Physical Chemistry* (McGraw-Hill, 7th ed) (3 credits) *NOTE A/See § 200.4*

CHEMISTRY N-346 (474)
Chemistry of High Polymers II

Prerequisites: Chemistry N-231, N-241. Study of the physical chemistry of high polymers including: examination of the physical properties of polymers; methods for studying polymers; polymer solution theory; molecular weight distributions and fractionation; molecular weight determinations by colligative properties, light scattering and ultracentrifuge techniques; mechanisms and kinetics of condensation and addition, polymerization; free radical and ionic polymerization. Lectures only. Textbook: Billmeyer: *Textbook of Polymer Science* (Interscience, 2nd ed) (3 credits)

CHEMISTRY N-350
Introductory Chemical Instrumentation

Prerequisites: Chemistry N-211, N-213, N-231 or Chemistry N-231 and Biology N-203 or Biology N-204. Basic principles and applications of UV, IR, Raman fluorescence, phosphorescence, NMR, and EPR spectroscopy and mass spectrometry to Chemistry and Biochemistry. Lectures and laboratory. Textbooks: *To be announced.* (3 credits) *NOTE A/See § 200.4*

CHEMISTRY N-352
Methods of Separation and Practice of Biochemical Techniques.

Prerequisites: Chemistry N-211, N-213; *or* Biology N-202 and N-203 or N-204 and Biology N-380 previously or concurrently. Separation by solvent extraction, countercurrent separation, ion exchange, etc.; principles and applications of gas chromatography. Thin Layer chromatography, gel filtration and electrophoresis. Lectures and Laboratory. (3 credits) *NOTE A/See § 200.4.*

CHEMISTRY N-354 (499)
Introductory Instrumentation

Prerequisites: Chemistry N-211, N-213; or Biology N-202, N-203 or N-204, and Biology N-380 previously or concurrently. Basic principles of electricity and electronics; analysis of operational amplifier, servorecorder, Ph meter, polarograph, logic and data acquisition circuits. Lectures and laboratory. Textbook: Malmstadt and Enke: *Digital Electronics for Scientists* (Benjamin) (3 credits) *NOTE A/See § 200.4*

CHEMISTRY N-371 (441)
General Biochemistry

Prerequisites: Chemistry N-231 and 6 credits in Biological Sciences at the university level; Chemistry students must have, in addition, Chemistry N-211 and N-241. Biological Science students must have, in addition, 6 credits in Biological Sciences at the university level. An introduction to the Chemistry of a living cell: protein structure and function; enzymology; metabolic pathways; energy production; protein and nucleic acid synthesis. Lectures and laboratory. Textbook: Stryer: *Biochemistry* (Freeman) (6 credits)

CHEMISTRY N-380
General Industrial Chemistry

Prerequisite: Second year chemistry students or permission of the Department. Broad outline of major factors to be considered by the chemical industry when contemplating manufacture of a new product or product group with special emphasis on market determination; customs; tariffs; use of Statistics Canada data; existing or potential competition; inherent advantages or disadvantages; relative importance of labour versus capital; plant location; transportation considerations; by-product disposition; hazard and pollution considerations; government regulated products; government incentives; marketing channels; export considerations; foreign tariffs and non-tariff barriers. Lectures only. (3 credits)

CHEMISTRY N-382 (462)
Industrial Organic Chemistry I

Prerequisite: Chemistry N-231. Study of selected industrial organic processes. This course is not applicable towards a Specialization in Chemistry. Lectures only. Textbook: Shreve: *Chemical Process Industries* (McGraw-Hill, 3rd ed) (3 credits)

CHEMISTRY N-383 (463)
Industrial Organic Chemistry II

Prerequisite: Chemistry N-231. Study of additional organic processes not covered in Chemistry N-382. This course is not applicable towards a Specialization in Chemistry. Lectures only. Textbook: Shreve: *Chemical Process Industries* (McGraw-Hill, 3rd ed) (3 credits)

CHEMISTRY N-411
Optical Methods of Analysis

Prerequisites: Chemistry N-211, N-213. Review and extension of absorptimetric theory covered in Chemistry N-211. Instrumentation, principles and applications of nephelometry; turbidimetry; fluorescence; phosphorescence; flame absorption and emission spectroscopy; atomic absorption; flame photometry. Principles; instrumentation and applications of X-ray absorption emission (fluorescence) and diffraction; x-ray microprobe analysis. Textbook: *To be announced.* (3 credits).

CHEMISTRY N-419
Analytical Chemistry

Research Project and Thesis. Prerequisite: The student must be enrolled in the Specialization in Analytical Chemistry Programme. The student will work on a research project involving a theoretical and/or practical aspect of analytical chemistry, and will write a thesis on the results. The research project will be approved by a committee of members of the Department. (6 credits)

CHEMISTRY N-422
Selected Topics in Inorganic Chemistry

Prerequisites: Chemistry N-322 and N-323. Selected topics in the field of Inorganic Chemistry, particular topics may include: Kinetics and Mechanisms of Inorganic Reactions; Organometallic chemistry; Electronic Spectroscopy of Transition Metal complexes; Introduction to Crystallography; Inorganic Photochemistry; other current topics from the literature. Lectures only. Textbooks: *To be announced.* (3 credits)

CHEMISTRY N-431 (428)
Advanced Organic Chemistry

Prerequisites: Chemistry N-331, N-342, N-343 and N-350. Advanced stereochemistry: Physical and chemical aspects of stereochemistry, atropisomerism, asymmetric induction, and diastereoisomerism. Principles of synthesis. Syntheses of natural products and novel structures. Lectures and laboratory. Textbook: *To be announced.* (6 credits)

CHEMISTRY N-442 (434)
Statistical Thermodynamics

Prerequisites: Chemistry N-342 and N-343. Elements of probability theory; microcanonical, canonical and grand canonical ensembles; the

Boltzmann distribution; quantum mechanical treatment of an ideal gas; Fermi-Dirac and Bose-Einstein statistics; Einstein and Debye models of a monoatomic crystal; conformation of polymer chains. Lectures only. Textbook: Andrews: *Equilibrium Statistical Mechanics* (Wiley) (3 credits) *NOTE A/See § 200.4*

CHEMISTRY N-443 (435)
Advanced Thermodynamics

Prerequisite: Chemistry N-342 and N-343. Advanced topics in classical thermodynamics, comprising equilibrium and non-equilibrium approaches to selected systems. Methods of determination of activities; the free-energy function and its applications; thermodynamics of solids; estimation of thermodynamic properties; de Donder's concepts; fused salts; high temperature thermodynamics. Lectures only. (3 credits) *NOTE A/See § 200.4*

CHEMISTRY N-445
Advanced Physical Chemistry Laboratory

Prerequisites: Chemistry N-342 and N-343. Advanced experimentation in chemical kinetics and thermodynamics with complete laboratory reports. Laboratory only. (3 credits)

CHEMISTRY N-452 (492)
Chemical Spectroscopy

Prerequisites: Chemistry N-331, N-342, N-343, N-350. Rotational and rotational-vibrational spectroscopy of linear, symmetrical top and asymmetrical molecules; vibrational spectroscopy; molecular symmetry and group theory; Raman spectroscopy; Fourier transform spectroscopy; electron spin spectroscopy. Lectures and laboratory. Textbook: Brittain, George and Wells: *Introduction to Molecular Spectroscopy* (Academic Press) (3 credits) *NOTE A/See § 200.4*

CHEMISTRY N-453 (493)
Advanced Analytical Instrumentation

Prerequisites: Chemistry N-354. Digital electronics in control equipment; integration, signal averaging A to D and D to A conversion and data acquisition. Lectures and laboratory. Textbook: Malmstadt and Enke: *Digital Electronics for Scientists* (Benjamin) (3 credits) *NOTE A/See § 200.4*

CHEMISTRY N-462
Introduction to Quantum Chemistry

Prerequisites: Chemistry N-222, N-223, N-241, N-231. Development of wave theory, variational and perturbational approaches. Principles of Quantum Theory. Free electron model for conjugated systems. The hydrogen atom, the helium atom, the periodic system. Electron correlation. Lectures only. Textbook: La Paglia: *Introductory Quantum Chemistry* (Harper and Row) (3 credits) *NOTE A/See § 200.4*

CHEMISTRY N-463
Valence Theory

Prerequisites: Chemistry N-222, N-223, N-241, N-231, N-462. The diatomic molecule, the hydrogen molecule ion, simple LCAO, general LCAO, symmetry, the secular equation, homonuclear diatomic molecules, heteronuclear diatomic molecules, valence bond theory, molecular orbital theory. Polyatomic molecules. Pi electron theory, ligand field theory. Lectures only. Textbook: La Paglia: *Introductory Quantum Chemistry* (Harper and Row) (3 credits) *NOTE A/See § 200.4*

CHEMISTRY N-471 (443)
Advanced Biochemistry I

Prerequisites: Chemistry N-350, N-352, N-371. Selected topics in enzyme kinetics, enzyme mechanisms, and membrane structure and function. Laboratory: a set of experiments examining various aspects of protein synthesis. Lectures and laboratory. (6 credits)

CHEMISTRY N-472 (444)
Advanced Biochemistry II

Prerequisites: Chemistry N-350, N-352, N-371. Selected topics from the general areas of structural biochemistry; biosynthetic pathways; lipids; carbohydrates; nucleic acids. Lectures and laboratory. (6 credits)

CHEMISTRY N-481
Industrial Synthetic Chemistry

Prerequisites: Chemistry N-331, N-350 or equivalents. Selected fields of study in the industrial synthesis of fine chemicals, pharmaceutical intermediates, dyestuffs, pigments, agricultural chemicals and others. Group assignments will involve the up-scaling of laboratory synthesis to batch levels; evaluation of needs; search of patent literature, toxicology, pollution and other related industrial legislation. Lectures and laboratory. (3 credits)

CHEMISTRY N-491 (450)
Research Project and Thesis

Prerequisite: Permission of the Department. The student will work on a research project under the direction of a staff member, and will write a thesis on the results. (6 credits) *NOTE: Students planning to take this course must consult with the Chemistry Department as early as possible the year before the final year.*

This course was given in the Summer of 1976

CHEMISTRY N-339

Pharmacology

(3 credits)

91.8 Computer Science

91.8.1 PROGRAMME

24 Minor in Computer Science

12 Comp Sc S211[3]*, S221[3], S231[3], S322[3]
3 Comp Sc S216[3]**, S241[3]
9 Comp Sc Elec.

*NOTE: If an equivalent of Comp Sc S211 has been successfully completed prior to admission to the University, then this course should be replaced with a Comp Sc elective.

**NOTE: Students are cautioned that the courses Comp Sc S216 and S241 are not completely equivalent, in that Comp Sc S216 does not satisfy the prerequisite requirements for certain courses which Comp Sc S241 does.

91.8.2 COURSES

The courses in Computer Science listed below are acceptable as science credits in the Bachelor of Science degree. Course descriptions can be found in the Faculty of Engineering § 71.8

COMPUTER SCIENCE S211
Introduction to Computers and Computing.
(3 credits)

COMPUTER SCIENCE S216
Intermediate Scientific Programming
(3 credits)

COMPUTER SCIENCE S221
Introduction to Assembly Language Programming.
(3 credits)

COMPUTER SCIENCE S231
Introduction to Discrete Structures
(3 credits)

COMPUTER SCIENCE S241
Computer Languages and Programming.
(3 credits)

COMPUTER SCIENCE S322
Computer Organization
(3 credits)

COMPUTER SCIENCE S323
Mini-Computer Systems
(3 credits)

COMPUTER SCIENCE S325
Logical Design and Switching Theory
(3 credits)

COMPUTER SCIENCE S352
Data and File Structures
(3 credits)

COMPUTER SCIENCE S361
Elementary Numerical Methods.
(3 credits)

COMPUTER SCIENCE S426
Digital System Design
(3 credits)

COMPUTER SCIENCE S435
Formal Languages and Syntactic Analysis
(3 credits)

COMPUTER SCIENCE S436
Introduction to the Theory of Automata.
(3 credits)

COMPUTER SCIENCE S442
Programming Languages and Compiler Theory
(3 credits)

COMPUTER SCIENCE S443
Computer Operating Systems
(3 credits)

COMPUTER SCIENCE S445
Heuristic Programming
(3 credits)

COMPUTER SCIENCE S453
Data and File Structures II
(3 credits)

COMPUTER SCIENCE S465
Analysis of Algorithms
(3 credits)

COMPUTER SCIENCE S471
Computer Graphics
(3 credits)

COMPUTER SCIENCE S475
Discrete System Simulation
(3 credits)

COMPUTER SCIENCE S491
Computer Science Project
(6 credits)

91.9 Economics

The courses in Economics listed below are acceptable as science credits in the Bachelor of Science degree. Course descriptions can be found in the Sir George Williams Faculty of Arts § 41.

ECONOMICS S270
Mathematics for Economists I
(3 credits)

ECONOMICS S271
Mathematics for Economists II
(3 credits)

ECONOMICS S375
Introduction to Statistics for Economics
(3 credits)

ECONOMICS S412
Mathematical Economics I
(3 credits)

ECONOMICS S413
Mathematical Economics II
(3 credits)

ECONOMICS S476
Econometrics I
(3 credits)

ECONOMICS S477
Econometrics II
(3 credits)

91.10 Department of Geography

91.10.1 Programmes

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 91.3, 91.4

The superscript indicates credit value.

66 BSc Specialization in Geography

6 Geog S211[6]
6 Geog S260[3], S261[3]
6 Geog S271[6]
12 Chosen from Geog S371[6], S372[6], S373[6], S462[3], S463[3], S475[3], S476[3]
36 all chosen from one of the following groups: Environmental Geography, Hydrology, Geoscience. Choices must be made in consultation with the departmental adviser.

Environmental Geography

Geog S362[3], S363[3], S371[6], S372[6], S373[6]
Bio N-203[3], N-204[3], N-213[3], N-310[3], N-312[3], N-313[3], N-314[3], N-416[3].
Bot N-210[3], N-213[3], N-215[3], N-216[3], N-320[3]
Phys N-243[3], N-273[3]
Chem N-231[6], N-241[6], N-336[3], N-337[3]
Geol N-220[3], N-323[3]
Math N-210[3], N-241[6], N-270[6], N-310[3]

Hydrology

Geog S362[3], S363[3], S371[6], S372[6], S475[3], S476[3]
Bio N-203[3], N-204[3], N-213[3], N-314[3], N-416[3]
Bot N-216[3]
Geol N-215[3], N-246[3], N-352[3]
Math N-210[3], N-241[6], N-261[6], N-270[6]
Phys N-241[6], N-243[3], N-244[3], N-433[3]
Chem N-241[6]

Geoscience

Geog S362[3], S363[3], S371[6], S372[6], S475[3], S476[3]
Geol N-215[3], N-217[3], N-246[3], N-323[3], N-349[3], N-352[3]
Math N-241[6], N-261[6], N-270[6]
Phys N-241[6], N-243[3], N-244[3], N-433[3], N-493[1]

42 BSc Major in Geography

6 Geog S260[3], S261[3]
6 Geog S271[6]
12 Chosen from Geog S371[6], S372[6], S373[6], S462[3], S463[3], S475[3], S476[3]
18 all chosen from one of the three groups listed under Specialization in Geography: *Environmental Geography, Hydrology, Geoscience.*

30 BSc Minor in Geography

6 Geog S260[3], S261[3]
6 Geog S271[6]
12 Chosen from Geog S371[6], S372[6], S373[6], S462[3], S463[3], S475[3], S476[3]
6 Chosen from one of the three groups listed under Specialization in Geography: *Environmental Geography, Hydrology, Geoscience.*

91.10.2 COURSE DESCRIPTIONS

The courses in Geography listed below are acceptable as science credits in the Bachelor of Science degree. Course descriptions can be found in the Sir George Williams Faculty of Arts § 41.17.

GEOGRAPHY S260
Introduction to Cartography I
(3 credits)

GEOGRAPHY S261
Introduction to Cartography II
(3 credits)

GEOGRAPHY S271
The Natural Environment
(6 credits)

GEOGRAPHY S362
Quantitative Geography I
(3 credits)

GEOGRAPHY S363
Quantitative Geography II
(3 credits)

GEOGRAPHY S371
Biogeography
(6 credits)

GEOGRAPHY S372
Analysis of the Environment
(6 credits)

GEOGRAPHY S373
Climatology
(6 credits)

GEOGRAPHY S462
Advanced Cartography
(3 credits)

GEOGRAPHY S463
Topics in Applied Cartography
(3 credits)

GEOGRAPHY S475
Hydrology I
(3 credits)

GEOGRAPHY S476
Hydrology II
(3 credits)

91.11 Department of Geology

Associate Professor and Chairman of the Department
HENRY S. deROMER

Associate Professors
ANDRÉ N. DELAND
STEPHEN KUMARAPELI

91.11.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 91.3, 91.4

The superscript indicates credit value.

63 BSc Specialization in Geology

Year I

15 Geol N-217[3], N-220[3], N-231[3], N-245[3], N-246[3]
6 Chosen from Geol N-370[4], Chem N-211[4], N-213[2], N-241[6], Comp Sc N-211[3], Phys N-251[6], Bio N-380[3]

Year II

21 Geol N-232[3], N-333[6], N-338[3], N-349[3], N-352[3], N-353[3]
3 additional credits in Geol approved by the Department

Year III

15 Geol N-322[3], N-342[6], N-455[3], N-456[3]
3 additional credits in Geol

36 BSc Major in Geology

Year I

9 Geol N-215[3], N-231[3], N-323[3]

Year II

9 Geol N-246[3], N-333[6]

Year III

3 Geol N-220[3]
15 additional credits in Geol approved by the Department

45 BSc Major in Geology with a Minor in Ecology

Year I

15 Geol N-215[3], N-231[3], N-323[3], Bio N-203[3], N-204[3]

Year II

12 Geol N-246[3], N-333[6], Bio N-213[3]

Year III

3 Geol N-220[3]
15 additional credits in Ecol in consultation with the Department of Biological Sciences

24 Minor in Geology

6 Geol N-215[3], N-323[3]
18 additional credits in Geol

91.11.2 COURSE DESCRIPTIONS

GEOLOGY N-215
Introductory Geology

An elementary study of minerals and rocks, and of the internal and external processes which shape the earth's surface. Laboratory work deals with identification of minerals, rocks and fossils, as well as interpretation of topographic and geologic maps. Field trips to Mt. Royal, Eastern Townships and Laurentians. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

NOTE: Students who enter the Specialization in Geology without CEGEP Geology 901 or equivalent will be required to take Geology N-215 in addition to the programme.

GEOLOGY N-216
General Geology Lab

Prerequisite: None. Laboratory studies include investigation of rock and mineral specimens. Interpretation of topographic maps and aerial photographs; interpretation of Geomorphic and Geologic Maps — and the examination of selected fossils. Field trip to local areas. (3 credits)

GEOLOGY N-217
Earth Physics

Prerequisites: CEGEP Mathematics 103, 203, Geology N-215 or equivalent This course is directed toward the general understanding of physical phenomena of the solid earth. Subjects for consideration include the following: earth's origin age, radioactivity, magnetism, gravity field, seismology, heat flow, structure and physical state of the earth's interior, theory of sea-floor spreading, theories of mountain formation. Lectures and laboratory. (3 credits)

GEOLOGY N-220
Paleontology

A study of the evolution of plants, invertebrates and vertebrates in time and space, the fossil record; preservation, identification and

classification of fossils; methods and techniques. Lectures and laboratory. (3 credits).

GEOLOGY N-231 (221)
Mineralogy I

The study of the physical properties of minerals; their chemical properties; descriptive and determinative mineralogy; crystallography; various classes of symmetry. A few field trips near Montreal. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

GEOLOGY N-232 (222)
Optical Mineralogy

Prerequisite: Geology N-231. The study of minerals under the polarizing microscope. Identification of minerals in thin sections and in oil immersion. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

GEOLOGY N-245
Exploration Geology

Prerequisites: Geology N-215 and N-231 or approval of the Department. Two-week field school in May right after final exams. The student is introduced to surveying, and geological and geophysical mapping methods. (3 credits)

GEOLOGY N-246
Structural Geology

Prerequisite: Geology N-215 previously or concurrently. Folds and mesostructures and their qualitative and quantitative evaluation. Physical properties of rocks and their behaviour. Several field trips to the Appalachian area. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

GEOLOGY N-322 (424)
Stratigraphy

Prerequisite: Geology N-220. A thorough analysis of various stratigraphic principles will be made using examples from Canadian and American type stratigraphic models. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

GEOLOGY N-323 (425)
Historical Geology

Principles of historical geology and geochronology, evolution of major animal groups from Precambrian time to Recent including the evolution of man; geological evolution of North America; natural resources associated with sedimentary rocks. Lectures only. (3 credits) *NOTE A/See § 200.4*

GEOLOGY N-326
Geochemistry

Prerequisites: Geology N-215 and N-231. An introduction to geochemistry including the chemical make-up of the solar system and the geochemistry of the atmosphere, hydrosphere, crust, mantle and core. The chemistry of igneous, sedimentary and metamorphic rocks, with some emphasis on the trace elements which characterize each. Anomalous trace element concentrations in rocks, soils and water and the application to mineral exploration geochemistry. In the laboratory the material discussed in the lectures is illustrated by geochemical calculations, trace element distribution maps and methods of geochemical analysis. Lectures and laboratory (3 credits)

GEOLOGY N-328
Geomorphology

Prerequisite: Geology N-215. Fluvial and slope processes, influence of climate, rock type and structure on the development of land forms, coastal features; aeolian processes, glacial and periglacial activity. Laboratory work emphasizes interpretation of aerial photographs and topographic maps and a field excursion to local area. Lectures and laboratory. (3 credits)

GEOLOGY N-333
Petrology

Prerequisite: Geology N-231. The identification and description of hand specimens of sedimentary, igneous, and metamorphic rocks. Rock associations and methods of classifying rocks. Lectures and laboratory. (6 credits)

GEOLOGY N-335
Sedimentary Petrology

Prerequisites: Geology N-333, N-232 (may be taken concurrently). The occurrence and formation of sedimentary rocks. Laboratory includes a brief survey of techniques applied to unconsolidated sediments, but particular emphasis is placed on the microscopic examination of sedimentary rocks. Lectures and laboratory. (3 credits)

GEOLOGY N-338
Mineralogy II

Prerequisite: Geology N-231. Point and translational symmetry, point groups, space groups, interpretation of Space Group tables, elements of crystal chemistry, chemistry and phase relations of important rock forming minerals. Stereographic projections of crystal data, the Universal Stage and powder diffractometry in identifying minerals are subjects stressed in labs. Lectures and laboratory. (3 credits)

GEOLOGY N-342 (426)
Igneous and Metamorphic Petrology

Prerequisites: Geology N-215, N-232, N-323. Principles of physical chemistry applied to minerals and rocks; study of phase diagrams; the origin, formation, association, description and classification of igneous and metamorphic rocks. Lectures and laboratory. (6 credits) *NOTE A/See § 200.4*

GEOLOGY N-347
Structural Analysis

Prerequisite: Geology N-246. Reading, Presentation and Interpretation of geological data. Laboratory consists of evaluation of geological maps in plan and section, stressing the structural evolution of the areas studied. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

GEOLOGY N-349 (429)
Tectonics

Prerequisites: Geology N-217, N-246. Evolution of megastructures of the earth; orogeny; tectonic patterns and hypotheses; emplacement of plutons. Lectures only. (3 credits) *NOTE A/See § 200.4*

GEOLOGY N-352 (422)
Photogeology

Prerequisite: Geology N-246 or permission of the Department. Scope and purpose of photointerpretation; geometry of aerial photographs and basic applied photogrammetry; geological interpretation, both qualitative and quantitative, of aerial photographs from Canada and other countries; techniques used in base map preparation with and without control points; exercises in photogeological mapping using stereoscopes and plotters. Lectures and laboratory. (3 credits)

GEOLOGY N-353
Field Geology

Prerequisites: Geology N-333 and N-246 or permission of the Department. Two-week field school in May after the 2nd year final examination period. Working in groups of two, students will map an area in the Appalachians, prepare sections and write a geological report. Group study of important outcrops and quarries in the Eastern Townships and south of the border. Students are expected to pay a minimum amount of their room and board. No regular lecture hours. (3 credits)

GEOLOGY N-370
Analytical Methods in Geochemistry

Prerequisites: CEGEP Chemistry 201; CEGEP Physics 301; CEGEP Mathematics 103 and 203; or equivalent courses. Chemical equilibrium as applied to volumetric and gravimetric procedures; general theory of volumetric titrations; titration curves; application of general titration theory to neutralization precipitation; complexation oxidation-reduction and non-aqueous solvent titrations; theory of potentiometry and potentiometric titrations; theory of gravimetric analysis; methods of separation by chemical and physical means; electrogravimetry and electrolytic separations; absorptimetric theory and absorptimetric methods of analysis. Analyses of major and minor components of geological material. Lectures and laboratory. (4 credits) *NOTE A/See § 200.4*

GEOLOGY N-421 (430)
Geology of Canada

Prerequisites: Geology N-215, N-322 and N-333. The study of the geology, physical features and mineral resources of the five main natural regions of Canada. A number of selected areas will be examined in detail. Lectures only. (3 credits)

GEOLOGY N-445
X-Ray Crystallography

Prerequisites: Geology N-338. The nature of X-rays, diffraction, the reciprocal lattice, powder diffractometer, powder cameras, single crystal methods. Laboratory work will stress the techniques of powder diffractometry and Precession photography. Lectures and laboratory. (3 credits)

GEOLOGY N-455
Ore Deposits

Prerequisite: Geology N-333. An introduction to geological and mineralogical features and genesis of selected types of metallic and non-metallic ore deposits. Identification of ore minerals in hand specimen and under the microscope and an introduction to textures of ores. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

GEOLOGY N-456
Regional Economic Geology

Prerequisite: Geology N-455. A review of the distribution of ore deposits in time and space considered in the context of their geological environment and tectonic relations. Integrated hand specimen and microscopic examination of carefully located, representative samples from important mining camps. Lectures and laboratory. (3 credits) *NOTE A/See § 200.4*

GEOLOGY N-461 (441)
Exploration Geophysics

Prerequisites: Geology N-215, N-231 or permission of the Department. A brief study of the principles of magnetic, gravimetric, electric and seismic methods of mineral exploration; interpretation of geophysical data; organization of exploration programmes; selected case histories. Lectures and laboratory. (3 credits)

GEOLOGY N-462 (442)
Exploration Geochemistry

Prerequisites: Geology N-215 and N-231 or permission of the Department. Basic principles; primary and secondary dispersion processes and their significance in geochemical exploration; field and analytical techniques (one field excursion early in the fall term); interpretation of geochemical data; organization of exploration programmes; selected case histories. Lectures and laboratory. (3 credits)

GEOLOGY N-464

Prerequisite: Geology N-349 (may be taken concurrently). Evolution of the earth in the Precambrian era. Problems in Precambrian correlation, paleoclimates and structural history. Emphasis on Canadian and North American Precambrian areas. One term paper to be prepared. Lectures. (3 credits)

GEOLOGY N-466
Undergraduate Thesis

Students in their final year are expected to show competence in isolating and examining a geological problem using techniques available within the department, working in conjunction with assigned faculty advisers. Course evaluation will be based on the student's performance in the investigation and on the written report. Specialized students may take the course in consultation with the Department. (6 credits)

GEOLOGY N-475
Engineering Geology

Prerequisites: Geology N-215, (Geology N-246, N-352 recommended). Engineering properties of rocks and soils. Landslides, groundwater, frost action and permanently frozen ground. Application of geology to engineering problems — concrete petrology, tunnels, slope control, foundations, roads, airports, dams and reservoirs. One term paper to be prepared. Lectures and laboratory. The laboratory period will include field trips, engineering geology case histories, and feasibility study of engineering geology problems. (3 credits)

GEOLOGY N-476
Mineral Physics

Prerequisites: Geology N-338, N-333 and N-462. Selected aspects of the relationship of solid state characteristics of minerals to their conditions of formation and subsequent history. In the laboratory details of crystal structure, and considered and readily developed changes in solid-state conditions in minerals and metals are used to amplify the lecture material. Lectures and laboratory. (3 credits)

91.12 Department of Mathematics

Associate Professor and Chairman of the Department
MAURICE COHEN

Associate Professor and Assistant Dean
LEONDA S. ADLER

Professors
FREDERICK W. BEDFORD
VICTOR BYERS
MARTIN HARROW
NORMAN EDWARD SMITH

Visiting Professor
D. H. WHEELER

Associate Professors
KAILASH K. ANAND
MORTON M. BELINSKY
A. BOYARSKY
MARY A. BRIAN
JOSEF BRODY
W. P. BYERS
G. E. COHEN
T. DWIVEDI
R. L. HALL
JAMES C. HAYES
N. HERSCOVICS
JOEL HILLEL
M. KANTER
Z. KHALIL
G. S. LINGAPPAIAH
M. A. MALIK
EUGEN A. POLLITZER
HAROLD W. PROPPE
R. RAPHAEL
JOHN SENEZ
MANFRED E. SZABO
J. C. TURGEON
Y. H. WANG
M. ZAKI

Assistant Professors
M. ALBERTA BOSWALL
A. G. BUCKLEY
J. FIKSEL
M. KERVIN

Visiting Assistant Professor
RONALD J. STERN

Adjunct Assistant Professors
L. S. DUBE
B. MACGIBBON-TAYLOR
A. S. RAO

91.12.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 91.3, 91.4.

The superscript indicates credit value

Students who follow Mathematics Programmes must register with Department of Mathematics by Nov. 1 of each year.

72 BSc Honours in Applied Mathematics

Year I
24 Math N-241[6], N-261[6], N-281[6], N-292[6]
Year II
24 Math N-311[3], N-351[3], N-361[6], N-372[3], N-373[3]
Option A: N-331[6]
Option B: N-312[3], N-366[3]
Year III
24 Math N-433[3], N-434[3]
Option A: N-312[3], N-431[6], N-432[3], six credits approved by Department.
Option B: N-353[3], N-472[3], N-473[3], N-474[3], N-461[6]

NOTE: Students interested in Operations Research will take Option A, while those interested in Control Theory will choose Option B.

72 BSc Honours in Mathematics

Year I
24 Math N-241[6], N-261[6], N-281[6], N-292[6]
Year II
21 Math N-361[6], N-366[3], N-372[3], N-373[3], N-381[3], N-391[3]
Year III
15 Math N-461[6], N-466[3], N-491[3]; N-467[3] or N-492[3].
Year II and III
12 Chosen from Math N-311[3], N-312[3], N-321[3], N-322[3], N-331[6], N-351[3], N-392[3], N-431[6], N-432[3], N-433[3], N-451[3], N-471[3], N-475[3], N-499[3], courses in related fields with prior Departmental approval.

72 BSc Honours in Statistics

Year I
24 Math N-241[6], N-261[6], N-281[6], N-292[6]
Year II
21 Math N-351[3], N-352[3], N-361[6], N-366[3], N-372[3], N-381[3]
Year III
12 Math N-451[3], N-452[3], N-461[6]
15 Elective credits in Math or related fields with prior Departmental approval.

60 BSc Specialization in Applied Mathematics

36 Math N-241[6], N-261[6], N-281[6], N-292[6], N-311[3], N-351[3], N-361[6].
6 Chosen from Math N-270[6], N-372[3], N-373[3].
18 Chosen from Math N-312[3], N-331[6], N-341[3], N-353[3], N-354[3], N-366[3], N-381[3], N-431[6], N-432[3], N-433[3], N-434[3], N-422[3], N-471[3], N-472[3], N-473[3] with prior Departmental approval

NOTE: It is recommended that students choose their electives in accordance with their interests, e.g., Operations Research: N-312[3], N-331[6], N-431[6], and one of: N-432[3], N-433[3], N-434[3].
Control Theory: N-353[3], N-366[3], N-433[3], N-434[3], N-472[3], N-473[3].
Industrial Applications: N-312[3], N-331[6], N-341[3], N-353[3], N-442[3]

60 BSc Specialization in Mathematics

51 Math N-241[6], N-261[6], N-281[6], N-292[6], N-361[6], N-366[3], N-372[3], N-373[3], N-381[3], N-391[3], N-466[3], N-491[3]
9 Elective credits in Math or related fields with prior Departmental approval.

60 BSc Specialization in Statistics

42 Math N-241[6], N-261[6], N-281[6], N-290[3], N-312[3], N-341[3], N-343[3], N-351[3], N-352[3], N-372[3], N-441[3].
18 Chosen from Math N-291[3], N-331[6], N-342[3], N-353[3], N-354[3], N-361[6], N-431[6], N-442[3], N-451[3], N-452[3] (with prior Departmental approval)

42 BSc Major in Applied Mathematics

30 Math N-241[6], N-261[6], N-270[6], N-281[6], N-290[3], N-311[3].
12 Chosen from Math N-291[3], N-312[3], N-331[6], N-351[3], N-366[3], courses in related fields (with prior Departmental approval)

42 BSc Major in Mathematics

36 Math N-241[6], N-261[6], N-281[6], N-292[6], N-361[6], N-366[3], N-372[3].
6 Chosen from Math N-311[3], N-322[3], N-373[3], N-381[3], N-391[3] (with prior Departmental approval)

42 BSc Major in Statistics

36 Math N-241[6], N-261[6], N-281[6], N-290[3], N-341[3], N-343[3], N-351[3], N-352[3], N-372[3].
6 Chosen from Math N-312[3], N-342[3], N-353[3], N-441[3], N-442[3], N-451[3], N-452[3] (with prior Departmental approval)

24 Minor in Mathematics

12 Math N-261[6], N-281[6].
12 Chosen from Math N-241[6], N-270[6], N-292[6], N-311[3], N-366[3], N-372[3], N-373[3] (with prior Departmental approval)

NOTE 1: Substitutions in the electives to meet students' special requirements may be made by the Department.
2: It is recommended that students choose their electives in accordance with their main interest, viz,
Teaching: N-292[6], N-366[3], N-372[3]
Social Sciences: N-241[6], N-270[6]
Natural Sciences: N-270[6], N-311[3], N-366[3]

30 Minor in Mathematics for Students in Arts

30 Credits approved jointly by the Department of Mathematics and the Department in the Faculty of Arts in which the student follows the remainder of his programme. At least 18 credits must be at the level of Math N-241 and above.

NOTE: Arts students are also eligible for a regular Minor in Mathematics or Statistics provided they have the necessary prerequisites.

24 Minor in Statistics

12 Math N-241[6], N-341[3], N-343[3].
12 Chosen from N-261[6], N-281[6], N-342[3], N-351[3] with prior approval of the Department.

91.12.2 CERTIFICATE IN MATHEMATICS FOR TEACHERS (Elementary School Level)

The Department of Mathematics offers a Certificate in Mathematics for Teachers (Elementary School Level) for the professional development of teachers interested in mathematics. This programme was designed in accordance with the programme-cadre for Elementary Mathematics issued by the General Directorate of Elementary and Secondary Education and approved for perfectionnement by the Higher Education Branch of the Department of Education on February 15, 1974.

Practising teachers are offered the opportunity to improve their knowledge of mathematics in order to help them teach mathematics more effectively. The presentation will generally be in workshop form with emphasis on assignments which develop activities for classroom use. Courses will be offered on and off campus during the Winter and Summer months subject to demand and the availability of instructors.

Programme Director
M. A. BOSWALL

Admission Requirements
Entry into the programme requires a Quebec Teacher's Certificate.

30 Certificate in Mathematics for Teachers (Elementary School Level)

6 Math N-305[6].
24 Chosen from Math N-300[6], N-301[6], N-302[6], N-303[6], N-304[6], N-307[3], N-309[3].

NOTE: In some cases where students have completed similar mathematical courses in previous studies, the Mathematics Department may allow pro tanto credits up to a maximum of 12 credits.

91.12.3 CERTIFICATE IN MATHEMATICS FOR TEACHERS (Junior Secondary School Level)

The Department of Mathematics offers a Certificate in Mathematics for teachers who teach mathematics at the junior high school level. Some of the courses offered have been specially designed to deal with new subject matter which is being introduced into the secondary school curriculum, as well as with aspects of mathematical pedagogy necessary for the teaching of this material. This programme was approved for perfectionnement on February 14, 1974, by the Higher Education Branch of the Department of Education.

Programme Director
MARY A. BRIAN

Admission Requirements
Entry into the programme requires a Quebec Teacher's Certificate.

30 Certificate in Mathematics for Teachers (Junior Secondary School Level)

3 Math N-400[3].
27 Math N-401[6], N-402[3], N-403[3], N-404[6], N-405[3], N-406[3], N-407[6], N-408[3], N-409[3], N-410[3].

NOTE: In some cases where students have completed similar mathematical courses in previous studies, the Mathematics Department may modify a student's programmes to meet his professional requirements. It may grant pro tanto credits up to a maximum of 12 credits.

91.12.4 COURSE DESCRIPTIONS

MATHEMATICS N-200 (3 credits)
MATHEMATICS N-201 (3 credits)
MATHEMATICS N-202 (3 credits)
MATHEMATICS N-203 (3 credits)
MATHEMATICS N-204 (3 credits)
MATHEMATICS N-205 (3 credits)
MATHEMATICS N-206 (3 credits)
MATHEMATICS N-207 (3 credits)
MATHEMATICS N-208 (3 credits)
MATHEMATICS N-209 (3 credits)

Descriptions of the above courses are listed in the Sir George Williams Faculty of Arts, § 41.11.2.
NOTE: Science students may not take the above Mathematics courses for Science credits.

MATHEMATICS N-210
Mathematics for the Biological Sciences I
Prerequisite: CEGEP Mathematics 103 or equivalent. Discrete probability, probability distributions, difference equations, differential equations, transients, steady state solutions, system concept, block diagrams, linear programming, game theory, Markov chains, applications to ecology, population models, physiology. (3 credits)

MATHEMATICS N-220
Mathematical Methods in Chemistry
Prerequisite: CEGEP Mathematics 203 or equivalent. Partial derivatives. First order differential equations (first and second order chemical reactions). Hermite, Laguerre and Legendre equations. Solutions by power series. Eigenfunctions and eigenvalues, Sturm-Liouville Theory. (3 credits)

MATHEMATICS N-241 (440)
Introductory Mathematical and Applied Statistics
Prerequisite: CEGEP Mathematics 203 or equivalent. The introductory mathematical theory of statistics including: the experimental approach to statistics, probability, distributions, moments and sampling theory, problems in estimation, hypothesis testing, correlation and regression. (6 credits)

MATHEMATICS N-261
Advanced Calculus
Prerequisites: CEGEP Mathematics 105, 203. Methods of integration, Vector functions of a single variable, curves. Scalar functions of several variables, limits, continuity, partial derivatives, total differential. Vector functions of several variables, divergence, curl. Maxima and minima. Multiple integrals, change of variables. Line integrals, Green's theorem. Surface integrals, divergence theorem, Stokes' theorem. Applications. (6 credits)

MATHEMATICS N-270 (452)
Differential Equations
Prerequisite: CEGEP Mathematics 203 or equivalent. First order first degree equations, linear equations, operators, Laplace transforms, series solutions and special functions, numerical methods, elementary partial equations, Fourier series, application to systems. (6 credits) *NOTE A/See § 200.4*

MATHEMATICS N-281
Linear Algebra I
Prerequisites: CEGEP Mathematics 101, 105 or equivalent. Vectors in Rn, matrices, linear equations, vector spaces, linear transformations, determinants, equivalence relations on matrices, characteristic values and vectors, diagonalization, metric concepts. (6 credits)

MATHEMATICS N-290
Algebraic Systems (Introduction)
Prerequisite: Collegial pre-science mathematics profile or equivalent. Sets, functions, binary operations, examples of number systems, polynomial functions, divisibility, definitions and examples of groups and subgroups, fields. (3 credits) *NOTE A/See § 200.4*

MATHEMATICS N-291
Algebraic Systems (Continuation)
Prerequisite: Permission of the Department. Groups, rings, homomorphisms, integral domains, fields, polynomial rings. (3 credits) *NOTE A/See § 200.4*

MATHEMATICS N-292
Algebraic Systems I
Prerequisite: Collegial pre-science mathematics profile or equivalent. Sets, functions, binary operations, examples of number systems, polynomial functions, divisibility, groups, rings, homomorphisms, integral domains, fields, polynomial rings. (6 credits) *NOTE A/See § 200.4*

MATHEMATICS N-300
Number Systems

This course and the following course (N-301) are designed to cover the main mathematical topics in the programme-cadre for elementary schools. In both courses the study of the mathematical content will be linked to thorough consideration of classroom applications. A project will be included among the assignments in both courses. In both courses the mathematical language of sets, relations, functions and operations will be applied where appropriate, and various modes of graphical representation used.
Counting numbers and systems of numeration, number operations, factors and multiples, numbers as measures, classification and properties of geometrical shapes. (6 credits)
NOTE: This course is available only to practising teachers.

MATHEMATICS N-301
Mappings

This course and the preceding course (N-300) are designed to cover the main mathematical topics in the programme-cadre for elementary schools. In both courses the study of the mathematical content will be linked to thorough consideration of classroom applications. A project will be included among the assignments in both courses. In both courses the mathematical language of sets, relations, functions and operations will be applied where appropriate, and various modes of graphical representation used.
The extension of the number system to fractions, decimals and signed numbers. Equalities and inequalities, bases of numeration, introduction to the study of symmetry and geometric transformations. (6 credits)
NOTE: This course is available only to practising teachers.

MATHEMATICS N-302
Transformation Geometry

Prerequisite: Mathematics N-301. A more advanced study of symmetry and geometric transformations, applications in 2 and 3 dimensions, an overview of a K-6 programme of geometry. (6 credits)
NOTE: This course is available only to practising teachers.

MATHEMATICS N-303
Measurement

Prerequisite: Mathematics N-300. A more advanced study of measures and measurement, descriptive statistics and elementary notions of probability, an overview of a K-6 programme of measurement. (6 credits)
NOTE: This course is available only to practising teachers.

MATHEMATICS N-304
Advanced Topics in Elementary Mathematics

Prerequisite: Permission of the Department. Topics will be scheduled to meet more advanced mathematical needs of students, especially in the light of potential developments in the elementary school curriculum. (6 credits)
NOTE: This course is available only to practising teachers.

MATHEMATICS N-305
Psychology of Mathematics Education

Prerequisite: Any three of Mathematics N-300, N-301, N-302, N-303, N-304, or permission of the Department. The content of the course will be selected from those areas of psychological theory and research which have implications for the teaching of mathematics. It will normally include: psychological theories of cognition, studies of mathematical learning in children, motivation, applications of research to the classroom. (6 credits)
NOTE: This course is available only to practising teachers.

MATHEMATICS N-307
Selected Topics in Mathematics I

Prerequisite: Permission of the Department. Topics will be chosen to take advantage of competencies and interests of the instructor as well as of the students. (3 credits)
NOTE: This course is available only to practising teachers.

MATHEMATICS N-309
Selected Topics in Mathematics II

Prerequisite: Permission of the Department. Topics will be chosen to take advantage of competencies and interests of the instructor as well as of the student. (3 credits)
NOTE: This course is available only to practising teachers.

MATHEMATICS N-310
Mathematics for the Biological Sciences II

Prerequisite: Mathematics N-210 or equivalent. Continuous probability, stochastic processes, population models, systems of linear difference and differential equations, Laplace transforms, signal-flow graphs, systems trajectories, stability, applications to ecology and biology. (3 credits)

MATHEMATICS N-311
Numerical Analysis I

Prerequisite: Collegial pre-science mathematics profile or equivalent. Introduction to computers and Fortran, solutions of equations, curve fitting, numerical differentiation and integration, matrix computation, errors. Lectures and laboratory. (3 credits)

MATHEMATICS N-312
Numerical Linear Algebra

Prerequisite: Mathematics N-281 or equivalent. Linear systems, matrix inversion, relaxation methods, methods of least squares, G-inverses, canonical forms, determination of characteristic values, applications. (3 credits)

MATHEMATICS N-321
Set Theory

Prerequisites: 18 credits in post-collegial mathematics. Intuitive logic, axiomatic set theory, ordinals, axiom of choice, cardinals. (3 credits)

MATHEMATICS N-322
Mathematical Logic

Prerequisites: 18 credits in post-collegial mathematics. First-order theories, models, incompleteness, selected topics. (3 credits)

MATHEMATICS N-331
Deterministic Methods of Operations Research

Prerequisite: Mathematics N-281 or equivalent. Formulation of mathematical models in the deterministic case, methods of solution, testing the models. Application to allocation (linear and dynamic programming, duality), competition (game theory), scheduling, networks and flow. Emphasis on mathematical methods, including matrix algebra and search techniques. (6 credits)

MATHEMATICS N-341
Experimental Statistics
Prerequisite: Mathematics N-241 or equivalent. Experimental models. Regression and correlation, analysis of variance. Experimental designs. Randomized blocks, Latin squares, factorial confoundings. (3 credits)

MATHEMATICS N-342
Industrial Statistics
Prerequisite: Mathematics N-241 or equivalent. Concepts of statistical control, X, R, P and C charts. Acceptance sampling, sequential probability ratio tests, sampling inspection, continuous sampling plans, reliability and life tests. (3 credits)

MATHEMATICS N-343
Data Analysis and Survey Sampling
Prerequisite: Mathematics N-241 or equivalent. Basic concepts of sampling. Simple, stratified, systematic, cluster sampling. Optimum allocation, ratio estimates. Curve fitting, goodness-of-fit tests, non-parametric tests, correlation and regression (bivariate and multivariate). Course time equally divided between theory and practical work. (3 credits)

MATHEMATICS N-351
Discrete Probability and Markov Chains
Prerequisite: Mathematics N-241. Axiomatic approach to probability theory, Bayes' rule, occupancy, runs and matching problems. Discrete random variables and their distributions. Generating functions. Introduction to Markov chains and queues. (3 credits)

MATHEMATICS N-352
Mathematical Statistics
Prerequisites: Mathematics N-241, N-261. Introduction to multivariate distributions, sampling distributions, point and interval estimation, tests of hypotheses (parametric and non-parametric), regression models. (3 credits)

MATHEMATICS N-353
Stochastic Processes and Applications
Prerequisite: Mathematics N-351. Continuous time stochastic processes. Poisson processes, continuous time Markov processes, queuing models, birth and death processes, renewal theory and reliability of systems. (3 credits)

MATHEMATICS N-354
Information Theory
Prerequisite: Mathematics N-351 or equivalent or permission of Department. Information and sources, Shannon's theorem for Markov sources. Probability relations in a channel, mutual information, error probabilities and decision rules. (3 credits)

MATHEMATICS N-361
Real Analysis
Prerequisites: Mathematics N-261, N-281. Metric spaces, sequences and series, continuity, differentiation, Riemann integration, uniform convergence, equicontinuity, Weierstrass theorem. Differential forms, simplexes and chains, Stokes' theorem. (6 credits)

MATHEMATICS N-366
Complex Analysis I
Prerequisite: Mathematics N-261. Algebra and geometry of complex numbers, analytic functions, Cauchy-Riemann equations, the Cauchy integral formula, Taylor's and Laurent's theorems, calculus of residues. (3 credits)

MATHEMATICS N-372
Differential Equations I
Prerequisites: CEGEP Mathematics 105, 203; Mathematics N-281 previously or concurrently. First order differential equations, applications of first order differential equations. Second order linear equations, series solutions of second order linear equations, higher order linear equations, systems of equations. Difference equations. (3 credits) *NOTE A/See § 200.4*

MATHEMATICS N-373
Differential Equations II
Prerequisites: Mathematics N-372, N-366. Equations of hypergeometric type (Bessel's and Legendre's equations). Laplace transform, inverse transform, applications to partial differential, and integral, equations. Fourier series. Boundary value problems and Sturm-Liouville theory. (3 credits) *NOTE A/See § 200.4*

MATHEMATICS N-381
Linear Algebra II
Prerequisites: Mathematics N-281, N-291. Matrices, linear transformations, determinants, metric concepts, inner product spaces, dual spaces, spectral theorem, bilinear and quadratic forms, canonical forms for linear transformations, matrix functions, selected topics. (3 credits)

MATHEMATICS N-391
Algebraic Systems II
Prerequisite: Mathematics N-291. Groups: permutation groups, Cayley's theorem, cyclic groups, Lagrange's theorem, normal subgroups, quotient groups, isomorphism theorems. Rings: ideal and quotient rings, isomorphism theorems, characteristic. Fields: construction of quotient fields. Polynomials: polynomial rings, division algorithm, g.c.d., unique factorization, roots of a polynomial over a field. Selected topics. (3 credits)

MATHEMATICS N-392
Elementary Number Theory
Prerequisites: 18 credits in post-collegial mathematics. Number systems, division and factorization, number-theoretic functions, congruences, algebraic congruences and primitive roots, quadratic residues, diophantine equations. (3 credits)

MATHEMATICS N-400
Seminar on the Teaching of Mathematics
Prerequisite: Permission of the Department. This course is conducted in the form of a workshop and examines alternative methods of presentation of mathematical ideas at the secondary school level. It studies relevant aspects of the psychological development of the adolescent in the context of existing mathematics curricula. (3 credits)
NOTE: This course should be taken at the end of the programme. This course is available only to practising teachers.

MATHEMATICS N-401
Functions
Prerequisite: Collegial mathematics or equivalent. Sets and logic; ordered field of real numbers; relations, functions; exponential, logarithmic and trigonometric function. (6 credits)
NOTE: This course is available only to practising teachers.

MATHEMATICS N-402
Algebra I
Prerequisite: Mathematics N-401 or equivalent previously or concurrently. Natural numbers, integers and their properties. Sequences and progressions. Mathematical induction. Log-

ic. Real numbers, complex numbers. Polynomials. (3 credits)
NOTE: This course is available only to practising teachers.

MATHEMATICS N-403
Calculus I

Prerequisite: Mathematics N-401 or equivalent. Functional Notation, Limits and Continuity, Differentiation of Polynomials. The power, product, quotient and chain rules. Implicit differentiation. Higher derivatives. Mean Value Theorem, Rolles Theorem. Maxima and Minima.
Applications: Tangents to plane curves, related rates. The differential, use in finding approximations. Indefinite and definite integrals, areas and volumes. (3 credits)
NOTE: This course is available only to practising teachers.

MATHEMATICS N-404
Topics in Geometry

Certain fundamentals of the methods of Cartesian, vector and transformation geometry. Applications of these methods to topics presented as informal geometry in grades 7 - 10. Activity oriented. (6 credits)
NOTE: This course is available only to practising teachers.

MATHEMATICS N-405
Calculus II

Prerequisite: Mathematics N-403. Differentiation and integration of Trigonometric functions. Derivatives of Inverse Trigonometric functions, logarithmic functions and exponential functions. Methods of integration by parts, by substitution, by separation into partial fractions. Improper integrals, L'Hopital's Rule. Series: Convergency tests, Maclaurin and Taylor Theorems. (3 credits)
NOTE: This course is available only to practising teachers.

MATHEMATICS N-406
Algebra II

Prerequisite: Mathematics N-401 or equivalent. Systems of equations, determinants, Cramer's rule. Matrices, operations on matrices, the inverse matrix. Gauss-Jordan method. Matrix transformations. Linear programming. (3 credits)
NOTE: This course is available only to practising teachers.

MATHEMATICS N-407
Topics in Probability and Statistics

Prerequisite: Mathematics N-405 or equivalent or permission of the department. Introduction to, and brief historical survey of, probability and statistics. Techniques for teaching these topics in the junior secondary school curriculum. Application of the techniques of probability and statistics to the interpretation of research results in mathematics education. (6 credits)
NOTE: This course is available only to practising teachers.

MATHEMATICS N-408
Transformation Geometry

Prerequisite: Mathematics N-401 or equivalent. Distance preserving motions in the plane; affine transformations with applications in Euclidean geometry. Projective transformations and applications to conics. (3 credits)
NOTE: This course is available only to practising teachers.

MATHEMATICS N-409
Computational Mathematics

Prerequisite: Mathematics N-401 or equivalent. Introduction to the computer, and to the writing of simple programs in BASIC. The use of pocket calculators as pedagogic devices. Approximately one-third of the course will be spent on problems related to the secondary school curriculum which can be solved by computer or calculator. (3 credits) *NOTE A/See § 200.4*
NOTE: This course is available to practising teachers only.

MATHEMATICS N-410
Curriculum Seminar

Prerequisite: Permission of the Department. Conducted in the form of a workshop. Examines arithmetical, algebraic and geometrical-aspects of the mathematical curricula, grades 7-11. Critical examination of various textbooks and pedagogic approaches used in the schools. (3 credits)
NOTE: This course is available to practising teachers only.

MATHEMATICS N-431
Probabilistic Methods of Operations Research

Prerequisites: (a) Mathematics N-261; N-351 previously or concurrently; (b) Mathematics 440, 452. Difference and differential-difference equations, z transforms, stochastic distributions. Markov chains, queuing theory, inventory theory, reliability and renewal theory, competition and introduction to decision theory, dynamic programming, simulation and Monte Carlo techniques; formulation, testing and stability of mathematical models incorporating uncertainty. (6 credits)

MATHEMATICS N-432
Theory of Graphs and Networks

Prerequisite: Mathematics N-331. Directed and undirected graphs. Partitions, planar and non-planar graphs, matrix representation, applications, network theory. (3 credits)

MATHEMATICS N-433
Calculus of Variations

Prerequisite: Mathematics N-373 or N-270. Nature of problems. Weak variations, the first variation, Euler's equation. The second variation, Jacobi's equation, Legendre's test, conjugate points. Relative maxima and minima, isoperimetrical problems. Integrals with variable end points. Applications to problems in pure and applied mathematics; the principle of least action. Strong variations, the Weierstrass E-function. (3 credits)

MATHEMATICS N-434
Optimization Theory

Prerequisite: Permission of Department. A survey of optimization methods, search techniques, non-linear programming, dynamic programming. An introduction to optimal control and to the maximum principle. (3 credits)

MATHEMATICS N-435
Topics in Numerical Analysis

Prerequisite: Mathematics N-311, N-312 or equivalent. Advanced problems and techniques in numerical linear algebra, systems of non-linear equations, roots of polynomials, spline fitting, mini-max fitting, extrapolation techniques, solution of initial value ordinary differential equations, solution of two-point boundary value problems in ordinary differential equations, elliptic partial differential equations, finite difference and finite element methods for hyperbolic and parabolic partial differential equations. (3 credits)

MATHEMATICS N-441
Seminar in Applied Statistics

Prerequisite: Permission of the Department. Formulation of some real-life problems where applications of statistical methods can be exploited. Analysis, interpretation of data and inference of results. A report on a specific aspect of statistics may be required. (3 credits)

MATHEMATICS N-442
Introduction to Reliability

Prerequisite: Mathematics N-351. Statistical failure models and reliability testing; system reliability; standby redundancy with and without repair; limit distributions. (3 credits)

MATHEMATICS N-451
Topics in Probability

Prerequisites: Mathematics N-261; N-351 or permission of Department. Axioms for probability space. Random variables. Distribution functions, mathematical expectation. Law of large numbers. Limit theorems. Stochastic processes, Markov, Poisson and Gaussian Processes. (3 credits)

MATHEMATICS N-452
Linear Statistics

Prerequisites: Mathematics N-261, N-281, N-352. Multivariate normal distribution, distribution of quadratic forms. Linear models. General linear hypothesis of full rank. (3 credits)

MATHEMATICS N-461
Real Analysis II

Prerequisites: Mathematics N-361. Measure spaces, Lebesgue measure, measurable functions, Lebesgue integration. Lebesgue-Stieltjes integration. Function spaces, Ascoli-Arzela theorem, Stone-Weierstrass theorem, Hilbert spaces, Hahn-Banach theorem. (6 credits)

MATHEMATICS N-466
Complex Analysis II

Prerequisite: Mathematics N-366. Analytic functions, power series, Cauchy's theorem, Morera's and Liouville's theorems, singularities, maximum modulus principles, Rouche's theorem. Conformal mappings, linear transformations, analytic continuation. Special functions. (3 credits)

MATHEMATICS N-467
Complex Analysis III

Prerequisite: Mathematics N-466. Normal families, Riemann mapping theorem, harmonic functions, elliptic functions, univalent functions, selected topics. (3 credits)

MATHEMATICS N-471
Partial Differential Equations

Prerequisite: Mathematics N-373. Classification of partial differential equations, the Cauchy-Kowalewski theorem, characteristics, boundary value and eigenvalue problems for elliptic equations, initial value and initial boundary value problems for parabolic and hyperbolic equations. (3 credits)

MATHEMATICS N-472
Linear Systems

Prerequisite: Mathematics N-281; Mathematics N-270 or N-372, N-373. State space analysis and design of continuous and discrete systems. Controllability and observability, modal control, pole displacement techniques. Luenberger observers, Liapunov stability. (3 credits) *NOTE A/See § 200.4*

MATHEMATICS N-473
Non-Linear Systems

Prerequisites: Mathematics N-280, N-270 or N-373. Examples of linear and non-linear systems, phase-plane analysis; periodic solutions and limit cycles; non-linear differential equations; perturbation methods; stability in the sense of Liapunov; linearization, Liapunov's direct method; Lagrange stability and boundedness of solutions, circle and Popov's criteria. (3 credits) *NOTE A/See § 200.4*

MATHEMATICS N-474
Introduction to Mathematical Control Theory

Prerequisites: Mathematics N-361 and N-472. Linear control systems. Attainable sets: compactness, convexity, continuity in time. Controllability and observability. Time optimal control. Maximum principle. Examples of physical systems. Switching curves. Optimal control with quadratic cost. (3 credits)

MATHEMATICS N-475
Geometry and Topology

Prerequisite: Permission of Department. Topological spaces, separation axioms, compactness, connectedness. Introduction to combinatorial and algebraic topology: Euler characteristic; classification of surfaces; winding number of a curve, degree of a map, vector fields, applications; map colouring problems. (3 credits)

MATHEMATICS N-491
Abstract Algebra I

Prerequisite: Mathematics N-391. Groups: composition series, direct product of groups, abelian groups, Sylow's theorems, solvable groups. Rings: Euclidean rings, unique factorization domains, principal ideal domains. Maximal, prime and primary ideals; ideals in noetherian rings, modules and vector spaces. Algebras. Selected topics. (3 credits)

MATHEMATICS N-492
Abstract Algebra II

Prerequisite: Mathematics N-491. Fields: prime fields; algebraic, finite, simple, separable, inseparable, normal extensions; finite fields; perfect and imperfect fields. Group characters. Galois theory; the fundamental theorem, solvability by radicals, transcendental extensions. (3 credits)

MATHEMATICS N-498
Mathematical Thinking II

Prerequisite: Permission of the Department. A student who has already received credit for Mathematics N-499 and wishes to repeat this course for credit registers under Mathematics N-498. (3 credits)

MATHEMATICS N-499
Mathematical Thinking I

Prerequisite: Permission of Department. This course is intended to stimulate the student's mathematical creativity and to improve his ability to think systematically, analyze problems and communicate his reasoning. Students participate actively in discussing and solving problems drawn from a variety of sources (including previous Putnam competitions) and are expected to explain their thinking both orally and in writing. Discussions include the following topics: problem posing; Polya's techniques of problem solving; equivalence and similarity of problems; generalization; applications. The problems are selected from: combinatorics, geometry, group theory, number theory, real analysis, etc. (3 credits)

NOTE: A student who has already received credit for Mathematics N-499 and wishes to repeat this course for credit registers under Mathematics N-498.

91.13 Department of Physics

Associate Professor and Chairman of the Department
STANLEY P. MORRIS

Adjunct Professor
WALTER R. RAUDORF

Associate Professors
DAVID E. CHARLTON
NELSON W. EDDY
BARRY FRANK
ARLIN L. KIPLING
JOHN A. MACKINNON
SUSHIL K. MISRA
JEAN-PIERRE PETOLAS
RAMESH C. SHARMA
ADOLPH E. SMITH

Adjunct Associate Professor
PHOTIOS A. ANNINOS

Adjunct Assistant Professor
SILVIO G. ZENONE

91.13.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 91.3, 91.4.

The superscript indicates credit value.

72 BSc Honours in Physics (Experimental Option)
Year I
16 Phys N-241[6], N-251[6], N-291[2], N-292[2]
6 Math N-261[6]
Years I, II and III
41 Phys N-295[4], N-336[6], N-352[3], N-355[5], N-364[3], N-392[1], N-394[1], N-433[3], N-465[3] or N-467[3], N-477[3], N-478[3], N-493[1], N-495[1], N-496[4]
9 Chosen from Phys N-345[6], N-435[3], N-457[6], N-465[3], N-467[3]

72 BSc Honours in Physics (Theoretical Option)
Year I
14 Phys N-241[6], N-251[6], N-291[2] or N-292[2]
6 Math N-261[6]
Years I, II and III
43 Phys N-295[4], N-336[6], N-345[6], N-352[3], N-355[5], N-364[3], N-394[1], N-433[3], N-457[6], N-477[3], N-478[3]
6 Chosen from Phys N-435[3], N-465[3], N-467[3]
3 Chosen from Phys N-291[2], N-292[2], N-392[1], N-435[3], N-465[3], N-467[3], N-495[1]

60 BSc Specialization in Physics (Experimental Option)
Year I
16 Phys N-241[6], N-251[6], N-291[2], N-292[2]
6 Math N-261[6]
Years I, II and III
38 Phys N-295[4], N-336[6], N-352[3], N-355[5], N-364[3], N-392[1], N-394[1], N-433[3], N-465[3] or N-467[3], N-477[3], N-493[1], N-495[1], N-496[4].

60 BSc Specialization in Physics (Theoretical Option)
Year I
14 Phys N-241[6], N-251[6], N-291[2] or N-292[2]
6 Math N-261[6]
Years I, II and III
34 Phys N-336[6], N-345[6], N-352[3], N-364[3], N-394[1], N-433[3], N-457[6], N-477[3], N-478[3]
6 Chosen from Phys N-453[3], N-465[3], N-467[3]

90 BSc Specialization in Physics Marketing
24 Phys N-241[6], N-251[6], N-291[2], N-292[2], N-364[3], N-394[1], N-295[4]
12 Phys N-296[5], N-336[6], N-345[6], N-352[3], N-355[5], N-392[1], N-396[5], N-397[5], N-433[3], N-435[3], N-457[6], N-465[3], N-477[3], N-478[3], N-480[4], N-493[1], N-495[1]
6 Math N-261[6]
6 QMC243[3], C244[3] or equivalent
3 Comp Sc C211[3]
6 Acc C213[3], C218[3]
6 Man C213[3], C340[3]
6 Econ L or S209[3], L or S210[3] or L or S212[3]
6 Mark C213[3], C350[3]
15 from Department of Marketing

36 BSc Major in Physics
These credits are to be chosen in consultation with the Department
NOTE: Students following the major in Physics must register by November 1 of each year with the department.

24 Minor in Physics
These credits are to be chosen in consultation with the department,
NOTE: Students following the minor in Physics must register by November 1 of each year with the department.

32 Certificate in Scientific Measurement (Biology Option)
12 Bio N-202[3], N-203[3], N-380[3], N-381[3]
6 Chem N-352[3], N-354[3]
14 Phys N-295[4], N-396[5], N-397[5]

32 Certificate in Scientific Measurement (Chemistry Option)

18 Chem N-211[4], N-213[2], N-311[3] or N-411[3], N-352[3], N-354[3], N-453[3]
14 Phys N-295[4], N-396[5], N-397[5]

31 Certificate in Scientific Measurement (Physics Option)

17 Phys N-251[6], N-292[2], N-295[4], N-355[5],
3 Chosen from Phys N-243[3], N-352[3], N-364[3]
5 Chosen from Phys N-296[5], N-396[5], N-397[5]
6 Math N-261[6]

NOTES:
(i) It is recommended that Physics students take the following Minor in Mathematics: Maths N-261[6], N-270[6], N-281[6], N-311[3], N-366[3].
(ii) In general, the experiments involved in the laboratory courses can be done from week to week at variable times chosen by the student.
(iii) All laboratory courses in Physics with one credit must be completed in one term.

91.13.2 DEPARTMENT OF PHYSICS

Physics is the most basic and therefore the most general field of science. Physics is concerned with the behaviour of matter and energy from the basic unit of the atom to the billions of stars in the universe. Its range stretches from the theoretical possibilities of black holes in space to the practicability of a printed circuit.

A physicist can apply himself to almost any field of endeavour, for example finding the explanation for the motion of charge carriers in an integrated circuit, or the details of information exchange between a measuring apparatus and a computer. Thus a physicist has the capability of becoming both the designer and the user of modern equipment. Computers were in use (as multichannel analysers for measuring radiation) in physics laboratories long before the business community thought of using them, while integrated circuits were also used in multichannel analysers to perform arithmetic functions before the first pocket calculator was conceived. Stereo manufacturers became aware of the virtues of field-effect transistors which are used by physicists in particle detector preamplifiers.

Because physicists have so often been at the forefront of new discoveries, they tend to be the experts to whom everyone turns for advice.

The tradition of a physicist doing basic research in a very specialized field is still important. However, at the Sir George Williams Campus, in addition to teaching basic physics, we also train students in areas of applied physics. To this end, a variety of options is available, leading to direct employment at the Bachelor or Certificate level.

91.13.3 COURSE DESCRIPTIONS

Please note that new course numbers have been implemented this year. For equivalent course numbers under the old system, please consult § 200.4

PHYSICS N-204
Mechanics

Prerequisite: CEGEP Mathematics 103 or equivalent, previously or concurrently. Kinematics. Newton's Laws of Motion. Statics, dynamics. Conservation of momentum and energy. Periodic motion. Lectures only. (3 credits) *NOTE A/See § 200.4*
Science students may not take this course for Science credits. See Physics N-224 for laboratory associated with this course.

PHYSICS N-205
Electricity and Magnetism

Prerequisite: Physics N-204 or equivalent. Electrical charge and Coulomb's Law. Electrical field and potential. Capacity. Steady state and transient currents. Electromagnetic induction and alternating currents. Lectures only. (3 credits) *NOTE A/See § 200.4*
Science students may not take this course for Science credits. See Physics N-225 for laboratory associated with this course.

PHYSICS N-206
Waves and Modern Physics

Prerequisite: Physics N-204 or equivalent. Simple harmonic motion. Wave propagation. Superposition. Stationary waves. Doppler effect. Interference. Diffraction. Photoelectric effect. Compton effect. Bohr's atom. Radioactivity, fission, fusion. Lectures only. (3 credits) *NOTE A/See § 200.4*
Science students may not take this course for Science credits. See Physics N-226 for laboratory associated with this course.

PHYSICS N-210
Discoveries in Physics

A non-mathematical course in physics specifically designed for students who have had little or no experience in physics. It traces the fundamental ideas from which modern physics has emerged and attempts to develop insights into the understanding of natural phenomena. Lectures only. (6 credits) *NOTE A/See § 200.4*
Science students may not take this course for Science credits.

PHYSICS N-224
Introductory Experimental Mechanics

Prerequisite: Physics N-204, previously or concurrently or permission of the Department. A laboratory course covering fundamental experiments in classical mechanics. Experiments will include: resolution of forces, centrifugal force and conservation of energy, pendulums. Laboratory only, 10 experiments. (1 credit) *NOTE A/See § 200.4*
Science students may not take this course for Science credits.

PHYSICS N-225
Introductory Experimental Electricity

Prerequisite: Physics N-205, previously or concurrently or permission of the Department. A laboratory course covering fundamental experiments in electricity. Experiments will include Kirchoff's law, resistors in series and parallel, oscilloscope, induction, AC. Laboratory only, 10 experiments. (1 credit) *NOTE A/See § 200.4*
Science students may not take this course for Science credits.

PHYSICS N-226
Introductory Experimental Waves and Modern Physics

Prerequisite: Physics N-206, previously or concurrently or permission of the Department. A laboratory course covering the fundamental experiments in waves and modern physics. Experiments include spectrometer measurements, Newton's rings, and measurements involving radioactivity. Laboratory only, 10 experiments. (1 credit) *NOTE A/See § 200.4*
Science students may not take this course for Science credits.

PHYSICS N-241
Classical Mechanics

Prerequisite: Physics N-204 or CEGEP Physics 101, or equivalent. Mathematics N-261 previously or concurrently. Laws of classical mechanics, statics, kinematics, dynamics of a particle, moving reference frames, central forces, dynamics of a system of particles, dynamics of rigid bodies in a plane, Lagrange's equations. Lectures only. (6 credits) *NOTE A/See § 200.4*
See Physics N-291 for laboratory associated with this course.

PHYSIC N-243
Classical Mechanics of Particles

Prerequisites: Physics N-204 or equivalent, Math N-261, previously or concurrently. Physical quantities of Mechanics, Laws of Classical Mechanics, Kinematics of a Particle, Dynamics of a Particle in Straightline and General Motion Moving Reference Systems. Lectures only. (3 credits) *NOTE A/See § 200.4*

PHYSICS N-244
Classical Mechanics of Rigid Bodies

Prerequisite: Physics N-243. Dynamics of a System of Particles, Statics of Rigid Bodies in a Plane and in General Motion, Lagrange's Equations. Lectures only. (3 credits) *NOTE A/See § 200.4*

PHYSICS N-251
Electrodynamics

Prerequisites: Physics N-205 or CEGEP Ph. 201 or equivalent, Mathematics N-261 previously or concurrently. Electric forces and electric fields, electric potential, capacitance, dielectric theory and behaviour, direct currents, resistance, thermoelectricity, moving charges and magnetic fields, electromagnetic induction, the magnetic properties of matter, galvanometers, transient currents, alternating current circuits, Maxwell's equations and electromagnetic waves. Lectures only (6 credits) *NOTE A/See § 200.4*
See Physics N-292 for laboratory associated with this course.

PHYSICS N-270
Introduction to Energy and Environment

This course is designed for students who have little or no background in physics. Topics covered include: Relationship of physics to environment and energy. Concept and definition of work and energy. Interaction of man and inanimate objects with the environment. Heat and chemical energy. Electromagnetic and nuclear energy. Conservation of energy — how it affects everyday life. Sources of energy used on earth. Solar energy. Production of wind power, water power, solar cells from sun's energy; biological uses, bio-power. Lectures only. (3 credits)
NOTE: Science students may not take this course for Science credits.

PHYSICS N-273
Energy and Environment

Prerequisite: Physics N-270 or CEGEP Physics 102 and 202 or equivalent. Nuclear energy stored in the earth. Geothermal energy. Biological energy stored in the earth. Second law of thermodynamics. Entropy Food energy. Home heating and cooling. Solar heating. Transportation of man, good, and energy. Recycling materials. Resource conservation and man's ability to change - need for a conservation ethic, need for alternate energy sources, need for public knowledge. Lectures only. (3 credits)

PHYSICS N-291
Experimental Mechanics

Prerequisite: Physics N-241, previously or concurrently. A laboratory course in mechanics. Experiments include the Kater pendulum, forced oscillations, damping and resonance, inelastic and elastic collisions. Laboratory only, 20 experiments. (2 credits) *NOTE A/See § 200.4*

PHYSICS N-292
Experimental Electrodynamics

Prerequisite: Physics N-251, previously or concurrently. A laboratory course in electrodynamics. Experiments include electrostatic focussing, motion in crossed magnetic and electric fields, resonance, Fourier analysis, feedback, transistors, oscillators. Laboratory only, 20 experiments. (2 credits) *NOTE A/See § 200.4*

PHYSICS N-295
Fundamental Electronics

Prerequisite: CEGEP Physics 201 or Physics N-205 or permission of the department. A practical laboratory course in electronics. Descriptive experiments to review: series and parallel circuits, meters, ohmeter, VOM and TVM circuit loading, reference points in measurements, current measurement in circuits, capacitors and RC time constants, transformers, AC power transfer, resonance, the oscilloscope. Detailed experiments are performed on: rectification, filters, voltage multipliers and regulators, zener diodes, transistor characteristics, biasing, the effect of temperature on transistors and temperature stabilization, amplification, feedback, input and output impedances of transistor circuits, Darlington amplifiers, multistage amplifiers; series and shunt DC regulator, field effect transistors, sine wave and LC oscillators; colpitts and phase shift oscillators, operational amplifiers: application and characteristics, audio amplifiers, I-F Transformer, limiter, amplitude modulation, frequency modulation. Laboratory only. (4 credits) *NOTE A/See § 200.4.*

PHYSICS N-296
Communication Media Electronics

Prerequisite: Physics N-295 or equivalent. Distortion, Noise, i.f. transformers, converters, power supplies, superheterodyne circuits, video amplifiers and detectors, VHF and UHF tuning, automatic gain control, FM and FM detectors, synchronization circuits, sweep circuits, automatic frequency and phase control, color demodulation, burst gate amplifiers, chromabandpass amplifiers, static convergence, dynamic convergence, high voltage generators. Techniques of troubleshooting electronic circuits. Laboratory only (5 credits)

PHYSICS N-336
Methods of Theoretical Physics

Prerequisites: Mathematics N-261, Physics N-204 or CEGEP Physics 101 or equivalent. Sturm-Liouville Theory; stretched string, Fourier series and applications Fourier integrals, vibrating membrane, operators, method of eigenfunction expansions, cylindrical functions, spherical harmonics, perturbation theory for S.L. problem. Group theory: symmetry considerations, definitions, theory of matrix representations, applications. Tensor calculus; tensor algebra, line element, covariant differentiation. Lectures only. (6 credits)

PHYSICS N-345
Advanced Classical Mechanics and Relativity

Prerequisite: Physics N-241. Variational principles and Lagrange's equations, kinematics of rigid body motion, Hamilton's equations of motion, Canonical transformations, Hamilton-Jacobi theory, small oscillations, special relativity, mechanics of deformable bodies. Lectures only. (6 credits)

PHYSICS N-352
Optics

Prerequisites: Mathematics N-261 and Physics N-205 or CEGEP Physics 201 or equivalent. Geometrical optics: Plane surfaces, spherical surfaces, optical instruments. Wave optics: review of simple harmonic motion, wave equation, superposition of waves, electromagnetic waves, scattering, polorization, interference-coherent sources, interference-uniform extended sources, Fresnel diffraction, waves in a dispersive medium, lasers. Lectures only. (3 credits) *NOTE A/See § 200.4*
See Physics N-392 for associated laboratory course.

PHYSICS N-355
Electronics

Prerequisites: Physics N-205 or CEGEP Physics 201 or equivalent, Physics N-295 previously or concurrently. Semiconductor Physics: pure semiconductors, P- and N- type semiconductors, PN junction, diode, bipolar and field effect transistors. Circuit Theory: Kirchhoff's Laws, transistor h- and y- parameter equivalent circuits, operational amplifiers, digital circuits. Lectures only, (5 credits) *NOTE A/See § 200.4*
See Physics N-295 for laboratory associated with this course.

PHYSICS N-364
Atomic Physics

Prerequisites: CEGEP Physics 301 or Physics N-206 or equivalent, or permission of the Dept.; CEGEP Math. 203 or equivalent. Kinetic theory, origin of quantum theory, electrons and ions, electromagnetic radiation, the Rutherford atom, the Bohr atom, quantum mechanics, atomic structure, molecules and solids. Lectures only. (3 credits) *NOTE A/See § 200.4*
See Physics N-394 for laboratory associated with this course.

PHYSICS N-383
Medical Physics

Prerequisite: CEGEP Pre-Science or equivalent. This course provides a background in the physics needed to understand instrumentation used in the fields of biology and medicine. Topics are taken from the fields of mechanics, properties of materials, thermodynamics, optics, electromagnetic theory and radiation physics. Lectures only. (3 credits)

PHYSICS N-392
Experimental Optics

Prerequisite: Physics N-352, previously or concurrently. An experimental course in optics. Experiments include diffraction, optical instruments, resonance and various experiments using lasers. Laboratory only, 10 experiments. (1 credit) *NOTE A/See § 200.4.*

PHYSICS N-394
Experimental Atomic Physics

Prerequisites: Physics N-364, previously or concurrently, Physics N-226 or CEGEP Physics 301 or equivalent or permission of the dept. An experimental course in atomic physics. Experiments include the Frank-Hertz experiment, the Zeeman effect, Mass spectrometer and some X-ray work. Laboratory only, 10 experiments. (1 credit) *NOTE A/See § 200.4.*

PHYSICS N-396
Computer Electronics

Prerequisite: Physics N-295 or equivalent. Diode clipping circuits, transistor as a switch, multivibrator circuits, logic circuits. Study and troubleshooting of integrated circuit logic gates, J-K flip flops, analogue to digital and digital to analogue converters, frequency divider circuits, digital multiplexers and demultiplexers, pulse distributor logic gates. Study and implementation of basic logic functions and Boolean expressions to program a small digital computer. Laboratory only (5 credits)

PHYSICS N-397
Experimental Medical Electronics

Prerequisite: Physics N-295 or equivalent. A laboratory course on the maintenance and use of medical instruments including ECG monitor, electro-cardiograph, cardiotachometer, blood pressure recorder, respiration rate recorder and clinical thermometer, The component parts of the instruments are studied first and then the instruments are constructed and operated. Laboratory only. (5 credits)

PHYSICS N-433
Thermodynamics

Prerequisites: Mathematics N-261, Physics N-241 or equivalent. Temperature, simple thermodynamic systems, work, heat and first law, ideal gases, kinetic theory, heat engines, reversible and irreversible processes, entropy, thermodynamics potentials. Lectures only. (3 credits) *NOTE A/See § 200.4.*
See Physics N-493 for associated laboratory course.

PHYSICS N-435
Statistical Physics

Prerequisite: Physics N-433 or equivalent. Basic probability concepts, statistical description of systems of particles, thermal interaction, microscopic theory and macroscopic measurements, Canonical distribution in the classical approximation, general thermodynamic interaction, elementary kinetic theory of transport processes. Lectures only. (3 credits)

PHYSICS N-457
Advanced Electrodynamics

Prerequisite: Physics N-251. Fundamentals of electromagnetics, multipole fields, the equations of Laplace and Poisson, the electromagnetic field equations, electromagnetic waves, reflection and refraction, the Lienard-Weichert potentials and radiation, radiating systems, classical electron theory, relativistic electrodynamics. Lectures only. (6 credits)

PHYSICS N-465
Nuclear Physics

Prerequisite: Physics N-364 or equivalent. Discussion of nuclear properties, deuteron, scattering, nuclear models, nuclear disintegrations, nuclear reactions, elementary particles and cosmic rays. Relationships between fundamental quantities and radiation dosage, shielding requirements and environmental concerns. Lectures only. (3 credits) *NOTE A/See § 200.4. See Physics N-495 for laboratory associated with this course.*

PHYSICS N-467
Solid State Physics

Prerequisite: Physics N-364 or equivalent or Physics N-477. Crystal structure, crystal binding, phonons and lattice vibrations, free electron Fermi gas, energy bands, semi-conductor crystals, superconductivity, dielectric properties, survey of magnetic properties, magnetic resonance, optical phenomena in insulators. Lectures only. (3 credits)

PHYSICS N-477
Quantum Mechanics I

Prerequisite: Mathematics N-270 or Phys. N-241 or N-336, N-364 previously or concurrently. State functions and their interpretation, linear momentum, motion of a free particle, Schrodinger's equation. Lectures only. (3 credits) *NOTE A/See § 200.4*

PHYSICS N-478
Quantum Mechanics II

Prerequisites: Physics N-477 and N-241 or equivalent. States of a particle in one dimension, approximation methods, systems of particles in one dimension, motion in three dimensions, angular momentum and spin. Lectures only. (3 credits) *NOTE A/See § 200.4*

PHYSICS N-480
Biophysics I

Prerequisite: University II standing in biology, physics or biochemistry or permission of the Department. A course on the interface between the biological and physical sciences. Emphasis will be on biomechanics, physiological fluid flows, and bioenergetic principles. Lectures and laboratory. (4 credits) *NOTE A/See § 200.4*

PHYSICS N-482
Biophysics II

Prerequisite: Physics N-480 or permission of the Department. Biological oscillations on a biochemical, cellular, organ level will be treated and mathematical models will be explained. Cybernetics will be introduced and simple applications to physiological control systems given. Mechanics will be applied to the problems of form and locomotion. Irreversible thermodynamics will be applied to the problem of growth. Cancer from a biophysical viewpoint will be studied. Lectures and laboratory. (4 credits)

PHYSICS N-493
Experimental Thermodynamics I

Prerequisite: Physics N-433 previously or concurrently. A laboratory course in thermodynamics. Experiments include Clement and Desormes experiment, vaporisation, specific heats, liquid nitrogen boiling. Laboratory only. 10 experiments. (1 credit) *NOTE A/See § 200.4*

PHYSICS N-495
Experimental Nuclear Physics I

Prerequisites: Physics N-394 and N-465 previously or concurrently. A laboratory course in nuclear physics. Experiments include gamma and beta ray spectroscopy, nuclear magnetic resonance, absolute counting, half-life determination, nuclear activities. Laboratory only, 10 experiments. (1 credit) *NOTE A/See § 200.4*

PHYSICS N-496
Methods of Experimental Physics

Prerequisites: Physics N-295 or equivalent and N-394 or equivalent or permission of the Department. Experiments include fundamentals of digital logic and applications of operational amplifiers, solid state and nuclear physics. Students are encouraged to propose new experiments and will have the opportunity to design and build equipment. Laboratory only. (4 credits)

This course was given in the Summer 1976.

PHYSICS N-273
Energy and Environment (3 credits)

91.14 Psychology (BSc)

91.14.1 PROGRAMMES

Students are responsible for satisfying their particular degree requirements, hence the following sequence must be read in conjunction with § 91.3, 91.4.

The superscript indicates credit value.

The following courses in Psychology plus the courses outlined in either the Biology option or the Mathematics option constitute an Honours program in Psychology, provided the student maintains the required academic standing.

75 BSc Honours in Psychology

Year I
12 Psyc S271[6] or S273[6], S412[6]
Year I or II
6 Psyc S241[6] or S242[6] or Math N-241[6] (in consultation with the Dept. of Psyc BSc Honours adviser.)
Year II or III
6 Psyc S461[6]
18 Chosen from Psyc S375[3], S421[6], S422[6], S432[6], S434[6], S438[6], S442[6], S452[6], S454[6], S462[6], S491[3], S492[3], S493[3], S494[3]
Year III
12 Psyc S413[6], S472[6]
Biology Option
Year I
12 Bio N-203[3], Zoo N-215[3], Chem N-231[6]
Year II
3 Bio N-224[3]
Year III
6 Zoo N-320[6]
or Mathematics Option
6 Math N-281[6]
15 Chosen from Math N-261[6], N-270[6], N-341[3], N-343[3], N-351[3], N-352[3], Comp Sc S211[3], S221[3]

60 BSc Specialization in Psychology

Year I
12 Psyc S271[6] or S273[6], S412[6]
Year I or II
6 Psyc S241[6] or S242[6] or Math N-241[6] (in consultation with the BSc adviser.)
Year II or III
6 Psyc S461[6]
12 Chosen from Psyc S421[6], S422[6], S428[6], S434[6], S438[6], S462[6]
Year III
24 Psyc S471[6] or equivalent, and six additional credits in Psyc in consultation with the Department. In addition, either Zoo N-215[3], Bio N-203[3] and Chem N-231[6] or twelve credits from Math N-261[6], N-270[6], N-281[6], N-341[3], N-343[3], Comp Sc S211[3], S221[3].

36 BSc Major in Psychology

Year I
12 Psyc S271[6] or S273[6], S412[6]
Year II and III
6 Psyc S461[6]
12 Chosen from Psyc S421[6], S422[6], S432[6], S434[6], S438[6], S462[3], S491[3], S492[3], S493[3], S494[3]
6 Psyc Elective credits

24 Minor in Psychology

Year I
6 Psyc S271[6]
Year II and III
6 Psyc S461[6]
12 Chosen from Psyc S421[6], S422[6], S432[6], S434[6], S462[6], S491[3], S492[3], S493[3], S494[3]

91.14.2 COURSES

The courses in Psychology listed below are acceptable as Science credits in the Bachelor of Science degree. Course descriptions can be found in the Sir George Williams Faculty of Arts § 41.20.

PSYCHOLOGY S241
Statistical Methods in Psychology A
(6 credits)

PSYCHOLOGY S242
Statistical Methods in Psychology B
(6 credits)

PSYCHOLOGY S271
Experimental Psychology 1A
(6 credits)

PSYCHOLOGY S273
Experimental Psychology 1B
(6 credits)

PSYCHOLOGY S375
Directed Study and Research on a Selected Topic
(3 credits)

PSYCHOLOGY S421
Learning
(6 credits)

SIR GEORGE WILLIAMS FACULTY OF SCIENCE
91.14.2 PSYCHOLOGY (BSc): COURSES

PSYCHOLOGY S422
Motivation
(6 credits)
PSYCHOLOGY S428
Measurement
(6 credits)
PSYCHOLOGY S432
Perception
(6 credits)
PSYCHOLOGY S434
Cognitive Processes
(6 credits)
PSYCHOLOGY S438
Developmental Psychology
(6 credits)
PSYCHOLOGY S442
Social Psychology
(6 credits)
PSYCHOLOGY S452
Personality
(6 credits)
PSYCHOLOGY S454
Behaviour Disorders
(6 credits)
PSYCHOLOGY S461
Physiological Psychology
(6 credits)
PSYCHOLOGY S462
Comparative Psychology
(6 credits)

PSYCHOLOGY S471
Experimental Psychology II
(6 credits)
PSYCHOLOGY S472
Advanced Experimental Problems
(6 credits)
PSYCHOLOGY S491 (492)
Special Seminar on a Selected Topic
(3 credits)
PSYCHOLOGY S493 (494)
Special Seminar on a Selected Topic
(3 credits)

91.15 Teaching of Science

91.15.1 PROGRAMME

Certificate in the Teaching of Science (Elementary School Level)

The Faculty of Science offers a Certificate in Teaching of Science (Elementary School Level) for the professional development of teachers interested in science. Practising teachers are offered the opportunity to improve their knowledge of science in order to help them teach modern science more effectively. The presentation will generally be in workshop form with emphasis on assignments which develop activities for classroom use. Courses will be offered on and off campus during the Winter and Summer months, subject to sufficient demand and the availability of suitable instructors.

Admission Requirements

Entry into the programme requires a teaching licence valid in the province of Quebec and a DCS or equivalent.

30 Certificate in the Teaching of Science (Elementary School Level)

30 Science N-310[6], N-311[6], N-312[6], N-313[6], N-314[6].

NOTE: In some cases where students have completed similar courses in previous studies, the Faculty may also allow pro-tanto credits up to a maximum of 12 credits.

91.15.2 COURSE DESCRIPTIONS

SCIENCE N-310
Matter and Energy

States and properties of matter, change of state, force, common machines, mass, volume, expansion, gravitation, heat, light, sound, electricity, magnetism, other sources of energy, conservation of energy. (6 credits)
NOTE: This course is available only to practising teachers.

SCIENCE N-311
Man and his Environment

Temperature, soil, water, air, atmosphere, reproduction, heredity, erosion, weather, nitrogen cycles, pollution, ecology and ecosystems. (6 credits)
NOTE: This course is available only to practising teachers.

SCIENCE N-312
Our Earth and the Universe

Time cycles, volume, density, constitution and properties of solar system, gravity, seasons, water and carbon cycles. (6 credits)
NOTE: This course is available only to practising teachers.

SCIENCE N-313
Living Things and Their Activities

The cellular structure of living things, food chains, plants, animals, germination, growth, soil, water, respiration, nutrition, life cycles. Classification into families, communities and populations. (6 credits)
NOTE: This course is available only to practising teachers.

SCIENCE N-314
Philosophy and Methodology of Teaching Science, Elementary Level

A study of the role, impact, and responsibility of science at the elementary school level, a study of science programme design, teaching processes and classroom activities at the elementary level. (6 credits)
NOTE: This course is available only to practising teachers.

200 Equivalents Index

200.1 Sir George Williams Faculty of Arts

NOTE A **The use of this note after certain course descriptions indicates, that there exists an equivalent course and that students who have the equivalent course may not take the listed course for credits. To find out the equivalents to the listed course refer to the index below.**

NOTE B **The use of this note after certain language course descriptions indicates, that students for whom this is their mother tongue or whose schooling has been conducted in this language will not be admitted to this course.**

NOTE C **The use of this note after certain course descriptions indicates, that with the permission of the Department a student may take the listed course twice for credits, provided that a different subject is dealt with the second time.**

Course	Old Numbers and Equivalents		
HUMANITIES			
Ancient Greek			
S210	N-210	211	011, 110
S241	N-241	212	012, 141
S441	N-441	421	021
S442	N-442	422	
Arabic			
S411	N-411	411	
Classics			
S212	N-212	212	011
S214	N-214	214	
S241	N-241	241	041, 141
S242	N-242	242	042, 142
Centre for Interdisciplinary Studies			
Interdisciplinary Studies			
S212	N-212	212, 448 Int St/Geog N-321, Hum of Sci N-321	
S333	N-333	333 Int St/Anth N-331, Int St/Anth N-332, Hum N-211, N-212	
Asian Studies			
	N-495	Int St N-495	
	N-496	Int St N-496	
C310		Mus 343 (443)	
Canadian Studies			
S211	N-211	Int St N-211	
S411	N-411	Int St N-411	
S412	N-412	Int St N-412	
C300		Mus 345, 445	
Science and Human Affairs			
S201	N-201	Any 2 of Hum of Sc N-201, N-211, N-261, N-271, Int St N-201	
S202	N-202	Any 2 of Hum of Sc N-202, N-211, N-261, N-271, Int St N-202	
S221	N-221	Any 2 of Hum of Sc N-221, N-211, N-261, Int St N-221	
S222	N-222	Any two of Hum of Sc N-211, N-222, N-261, N-271, Int St N-222	
S312	N-312	Hum of Sc N-212, N-312, Int St N-312	
S351	N-351	Hum of Sc N-451, Nat Sc N-231, Int St N-351	
S401	N-401	Hum of Sc N-401, N-471, Int St N-401	
S446	N-446	Hum of Sc N-446, Int St-Hist N-446	
S447	N-447	Hum of Sc N-447, Int St-Hist N-447	
S472	N-472	Int St-Pol Sc N-472, Hum of Sc N-472	
S493	N-493	Int St N-493	
S494	N-494	Int St N-494	
Urban Studies			
S260	N-260	Int St N-201, Int St N-202 Section UB	
S491	N-491	Int St N-491	
Women's Studies			
S241	N-241	Hum N-241, N-340, Int St N-241	
S242	N-242	Hum N-242, N-340, Int St N-242	
TESL			
S201	N-201		
S221	N-221	Appl Ling 241 or 441	
S231	N-231	Appl Ling 231 or 431	
S318	N-317, N-319		
S322	N-222	Appl Ling 421 or 221	
S323	N-223	Appl Ling 421 or 221	
S341	N-241		
S351	N-351	Appl Ling 451 or 251	
S382	N-480		
S383	N-480		
S384	N-480		
S411	N-311		
S412	N-312		
S415	N-315		
S422	N-422	Appl Ling 421 or 221	
S423	N-423	Appl Ling 421 or 221	
S431	N-431		
S434	N-434		
S442	N-442		
S479	N-479		
S482	N-481		
S483	N-481		
S484	N-481		
S491, S492	N-490		

Course	Old Numbers and Equivalents		
ESL			
S100	N-100	Engl 100	
S201	N-201	Engl 201	
S203	N-203		
S204	N-204		
English			
S211	N-211	211	
S225	N-225	225	
S226	N-226	219	N-219
S227	N-227	227	
S231	N-231	261	N-261
S232	N-232	266	N-266
S237	N-237	237	
S241	N-241	221	N-221
S244	N-244	244	
S260	N-260	217	N-217
S262	N-262	262	N-240
S263	N-263	240	040, 241, 243 N-240
S267	N-267	267	
S281	N-281	281	
S282	N-282	282	
S283	N-283	283	
S287	N-287	287	
S311	N-311	411	N-411
S318	N-318	280	N-280
S333	N-333	431	N-431
S334	N-334	434	N-434
S335	N-335	435	N-435
S336	N-336	436	N-436
S337	N-337	437	N-437
S343	N-343	246	
S344	N-344	444	N-444
S348	N-348	445	N-445
S351	N-351	461	N-461
S353	N-353	462	N-462
S356	N-356	446	N-446
S363	N-363	468	N-468
S364	N-364	264	
S365	N-365	268	
S367	N-367	463	N-463
S368	N-368	466	N-463
S374	N-374	454	N-454
S375	N-375	253	N-253
S376	N-376	455	N-455
S386	N-386	486	
S425	N-425	418	N-418
S426	N-426	419	N-419
S427	N-427	427	
S430	N-430	475	N-475
S440	N-440	440	
S442	N-442	442	
S443	N-443	443	
S448	N-448	448	
S449	N-449	449	
S456	N-456	464	N-464
S457	N-457	464	
S459	N-459	459	
S460	N-460	481	N-481
S466	N-466	483	N-483
S476	N-476	453	N-453
S478	N-478	478	
S479	N-479	479	
S487	N-487	467	N-467
S491	N-491	471	
S492	N-492	492	
S493	N-493	493	
S496	N-496	496	
S497	N-497	497	
French			
S201	N-201	201	001, High School Fr
S202	N-202	202	
S203	N-203	203	

Course	Old Numbers and Equivalents		
S211	N-211	211	011, 212
S214	N-214	214	014
S222	N-222	222	022
S241	N-241	241	
S310	N-310	411	091
S312	N-312	412	
S313	N-313	413	
S314	N-314	414	
S321	N-321	221	021, 221
S331	N-331	231	031
S381	N-381	481	
S410	N-410	410	
S415	N-415	415	
S417	N-417	417	
S418	N-418	418	
S419	N-419	419	
S420	N-420	420	
S421	N-421	421	
S422	N-422	422	
S423	N-423	423	
S424	N-424	424	
S426	N-426	426	
S427	N-427	427	
S428	N-428	428	
S429	N-429	429	
S431	N-431	431	
S432	N-432	432	
S440	N-440	440	
S441	N-441	441	
S442	N-442	442	
S443	N-443	443	
S461	N-461	461	
S462	N-462	462	
S463	N-463	463	
S465	N-465	465	
S466	N-466	466	
S467	N-467	467	
S491	N-491	451	
German			
S210	N-210	211	N-215, 011, 110, 015, 215
S215	N-215	215	011, 015, N-210
S241	N-241	212	012, 141
S311	N-311	411	091, N-211
S354	N-354	421	N-454
S451	N-451	424	
S452	N-452	422	
S453	N-453	423	
S455	N-455	451	
S456	N-456	425	
S457	N-457	426	
S458	N-458	427	
S459	N-459	428	
Hebrew			
S210	N-210	211	023, 011, 110
S241	N-241	212	012, 141
S441	N-441	422	
S442	N-442	424	
S451	N-451	423	023
Italian			
S210	N-210	211	011, 110
S221	N-221	221	021, 121
S241	N-241	212	012
S452	N-452	422	
Latin			
S210	N-210	201	001, High School Latin
S240	N-240	211	011
S341	N-341	421	021, N-241
S441	N-441	422	
S442	N-442	423	

Course	Old Numbers and Equivalents		
Linguistics			
S221	N-221	211	011, 121
S421	N-421	423	
S431	N-431	421	
S441	N-441	422	
S490	N-490	490	
S491	N-491	491	
Literature in Translation			
S350	N-350	450	
S351	N-351	451	
S352	N-352	452	
S353	N-353	453	
Philosophy			
S210	N-210	211, 011	
S211	N-211	212, 012	
S214	N-214		
S215	N-215		
S221	N-221	253, 053	
S231	N-231	241, 041	
S271	N-271	271, 071	
S273	N-273	273, 073	
S281	N-281		
S301	N-301	422	
S321	N-321	454	
S333	N-333	401, 403	
S361	N-361	261, 061	
S365	N-365	465	
S368	N-368	468	
S369	N-369	413	
S372	N-372	431	
S374	N-374	432	
S376	N-376	435	
S378	N-378	436	
S380	N-380	401	
S396	N-396	471	
S398	N-398	472, N-496	
S405	N-405	424	
S407	N-407	407	
S409	N-409	409	
S421	N-421	452	
S431	N-431	441	
S493	N-493	491	
S495	N-495	492	
Portuguese			
S441	N-441	411	
Religion			
S201	N-201	201	N-215
S211	N-211	211	
S213	N-213	213	
S222	N-222	262	
S301	N-301	251	051, N-251, N-351
S302	N-302	252	052, N-252, N-352
S311	N-311	411	N-411
S312	N-312	412	N-412
S313	N-313	413	N-413
S325	N-325	425	
S326	N-326	426	N-426
S327	N-327	427	N-427
S328	N-328	428	N-428
S329	N-329	329	
S330	N-330	330	
S331	N-331	331	
S332	N-332	332, 132	
S333	N-333	333	
S334	N-334	334	
S341	N-341	341	
S361	N-361	441	

Course	Old Numbers and Equivalents		
S362	N-362	442	
S363	N-363	463	261, 061, N-463
S364	N-364	447	
S401	N-401	401	
S435	N-435	435	
S443	N-443	443	
S465	N-465	465	
S491	N-491	448	
S492	N-492	449	
S493	N-493	493	
S497	N-497	497	
S498	N-498	498	
Russian			
S210	N-210	211	011, 015, 215, N-215
S215	N-215	215	011, 015, N-210
S241	N-241	212	012
S311	N-311	411	091, N-231
S351	N-351	421	N-451
S452	N-452	422	
S453	N-453	423	
S454	N-454	454	
S455	N-455	455	
Spanish			
S201	N-201	201	2 yrs High School,
S202	N-202	202	N-210, 211, 011, 110
S221	N-221	429	
S222	N-222	222	
S241	N-241	212	012
S311	N-311	411	N-411
S412	N-412	412	
S413	N-413		
S451	N-451	451	422 prior to 1969-70
S452	N-452	426, 427	
S453	N-453	453	422 prior to 1969-70
S454	N-454	423	
S455	N-455	421	
S456	N-456	456	
SOCIAL SCIENCES			
Anthropology			
S211	N-211	211	011, 111, 211, Soc 231
S333	N-333	333	Int St-Anth N-331 and N-332
S421	N-421	421	
S425	N-425	434	
S434	N-434	451	
S458	N-458	435	
S459	N-459	460	
S461	N-461	461	
S462	N-462	411	Soc 232
S464	N-464	464	N-463
S465	N-465	465	N-463
S466	N-466	466	
S467	N-467	467	
S468	N-468	468	
S494	N-494	486	N-495
S495	N-495	487	
S497	N-497	488	N-498
S498	N-498	489	
Applied Social Science			
S212	N-212	212	
S321	N-321	321, 411	
S351	N-351	251	
S400	N-400	400	
S413	N-413	413	
S421	N-421	421, 221	
S431	N-431	431	

Course	Old Numbers and Equivalents		
S441	N-441	441	
S451	N-451	451	
S452	N-452	452	
S461	N-461	461	
S471	N-471	471	
S472	N-472	472	
S481	N-481	481	
S482	N-482	482	
S485	N-485	485	
S486	N-486	486	
Economics			
S209	N-209	209	011, N-211, 211, N-212, 013, 009, 109
S210	N-210	210	011, N-211, 211, N-212, 013, 010, 110
S221	N-221	221	N-330, 021, 130
S270	N-270	281	Math N-203, N-209 or 005, or Econ 081
S271	N-271	282	Math N-415, N-450, N-451, Econ 082, Math N-206
S274	N-274	218	
S304	N-304	431	N-404
S305	N-305	432	N-405 or N-431 before 1969-70
S311	N-311	411	091, 413
S316	N-316	451	051
S318	N-318	452	
S375	N-375	375	Intro Stat. N-275, 075, 275
S411	N-411	412	Econ N-490 prior to 1976-77
S412	N-412	484	
S413	N-413	485	
S415	N-415	421	
S418	N-418	453	Econ N-490 prior to 1976-77
S420	N-420	454	
S422	N-422	461	
S423	N-423	462	
S426	N-426	426	
S427	N-427	427	
S428	N-428	472	271 or 471 prior to 1969-70
S429	N-429	471	
S430	N-430	420	
S434	N-434	424	
S438	N-438	428	
S440	N-440	422	
S442	N-442	488	
S443	N-443	489	
S446	N-446	423	
S460	N-460	445	
S464	N-464	444	
S465	N-465	443	
S468	N-468	447	
S476	N-476	482	
S477	N-477	483	
S490	N-490	491	
S491	N-491	492	
S493	N-493	493	
S494	N-494	494	
Education			
S201	N-201	212	
S202	N-202	202	
S210	N-210	210	
S230	N-230	230	
S261	N-261	261	
S311	N-311	311	
S312, S313	N-315	215	
S390	N-390	390	
S391	N-391	391	
S392	N-392	392	
S393	N-393	393	
S401	N-401	401	
S402	N-402	402	
S415	N-415	415	

Course	Old Numbers and Equivalents		
S416	N-416	455	
S417	N-417	442	
S421	N-421	421	Soc N-451
S430	N-430	411	
S441	N-441	431	211
S442	N-442	422	
S451	N-451	451	Soc N-451
S453	N-453	453	
S460	N-460	460	
S461	N-461	461	
S465	N-465	459	
S471	N-471	471	
S480	N-480	490	
S490	N-490	412	
S491	N-491	413	
S492	N-492	492	
S493	N-493	493	
S497	N-497	497	
S498	N-498	498	
Geography			
S211	N-211	211, 011, 111	
S212	N-212	212, 448, Geog-Int St N-321, Hum of Sc N-321	
S260	N-260	260, 060, 061, 160, N-261, 261 prior to 1973-74	
S261	N-261	261, 061, 161	
S271	N-271	231, 232, 031, 171	
S273	N-273	273, 173	
S316	N-316	416	
S322	N-322	421, N-421	
S323	N-323	411, 423	
S331	N-331	431	
S341	N-341	441	
S345	N-345	445	
S346	N-346	446	
S350	N-350	458	
S351	N-351	351	
S355	N-355	455	
S357	N-357	457	
S362	N-362	242, Stat course	
S363	N-363	243, Geog 242, Stat course	
S371	N-371	471	
S372	N-372	472	
S373	N-373	473	
S391	N-391	461	
S401	N-401	401	
S412	N-412	412	
S422	N-422	422	
S451	N-451	452	
S457	N-457	460	
S462	N-466	466	
S475	N-475	475	
S476	N-476	476, N-475, 475 prior to 1973-74	
S491	N-491	492	
History			
S210	N-210	213, 013, 110	
S212	N-212	212	
S214	N-214	214, Classics N-214	
S221	N-221	221, 021, 121	
S251	N-251	251, 051, 151	
S261	N-261	261, 061, 161	
S281	N-281	281, 181	
S321	N-321	423	
S322	N-322	424, 024, 122	
S323	N-323	422	
S325	N-325	425	
S326	N-326	426, 324	
S328	N-328		
S331	N-331	412	
S332	N-332	414	
S333	N-333	415	
S335	N-335	442	
S336	N-336	444	

Course	Old Numbers and Equivalents	
S337	N-337	413
S341	N-341	441
S345	N-345	431
S346	N-346	416, 334, 016, 146
S347	N-347	418
S351	N-351	453
S352	N-352	459, 457, 458
S354	N-354	456
S355	N-355	455
S358	N-358	452
S361	N-361	461
S362	N-362	462
S363	N-363	464
S365	N-365	481
S390	N-390	472
S391	N-391	478
S421	N-421	421
S431	N-431	434
S445	N-445	345
S446	N-446	446, Hum of Science N-446, Int St-Hist N-446
S447	N-447	447, Hum of Science N-447, Int St-Hist N-447
S451	N-451	451
S461	N-461	463
S490	N-490	474
S491	N-491	473
S492	N-492	475
S493	N-493	493

Political Science

S231	N-231	291	091
S240	N-240	211	011
S270	N-270	421	021
S311	N-311	431	031
S320	N-320	420	N-210, N-220, 210, 010
S321	N-321	425	
S330	N-330	251	051
S333	N-333	441	
S334	N-334	434	
S335	N-335	435	
S350	N-350	450	N-354, 414
S351	N-351	412	N-451, 416 or 417 prior to 1969-70
S353	N-353	453	N-352 or 413
S355	N-355	455	N-356
S381	N-381	423	N-481
S413	N-413	432	
S415	N-415	433	
S436	N-436	451	
S437	N-437	452	
S458	N-458	411	
S465	N-465	465	
S466	N-466	466	
S467	N-467	467	
S468	N-468	468	
S472	N-472	472	Pol Sc-Int St N-472
S483	N-483	422	221
S485	N-485	485	N-385
S491	N-491	491	

Psychology

S211	N-211	101, 201, 011
S212	N-212	212, 421, N-421, 422, N-422
S213	N-213	213, 421, N-421, 422, N-422
S214	N-214	251
S215	N-215	252
S241	N-241	241, Stat course
S242	N-242	242, Stat course
S271	N-271	271, 273
S273	N-273	273, 271
S302	N-302	436
S303	N-303	435
S304	N-304	440, 441, N-442
S305	N-305	441, N-442

Course	Old Numbers and Equivalents	
S308	N-308	308, 302
S309	N-309	409, 303
S375	N-375	275, N-275
S383	N-383	
S402	N-402	450
S403	N-403	449
S404	N-404	404
S405	N-405	405
S412	N-412	412
S413	N-413	413
S421	N-421	421
S422	N-422	422
S428	N-428	427
S432	N-432	432, 431
S434	N-434	434, 433, 431 prior to 1968-69
S438	N-438	438
S442	N-442	442, 441; Soc N-420
S452	N-452	452, 451
S454	N-454	454
S461	N-461	461
S462	N-462	462
S471	N-471	471
S472	N-472	472
S481	N-481	481, 221
S482	N-482	482, 223
S491	N-491	491
S492	N-492	492
S493	N-493	493
S494	N-494	494

Sociology

S210	N-210	212	011, 211, 111
S241	N-241	241	Stat course
S411	N-411	411	
S412	N-412	402	N-495, 487
S413	N-413	413	
S420	N-420	425	N-442, 442
S421	N-421	433	
S422	N-422	495	
S424	N-424	432	
S432	N-432	428	
S436, S437	N-430	423	
S438, S439	N-431	424	
S440	N-440	404	
S441	N-441	441	
S442	N-442	442	
S443	N-443	422	
S444	N-444	447	
S445	N-445	443	
S446	N-446	444	
S447	N-447	427	
S448	N-448	461	
S449	N-449	462	N-453, 462
S450	N-450	496	
S452	N-452	449	
S454	N-454	465	
S455	N-455	497	
S457	N-457	457	
S458	N-458	458	
S470	N-470	406	N-499, 409, 486
S471	N-471	407	N-497, 488
S481	N-481	491	
S493	N-493	493	N-456
S494	N-494	486	
S495	N-495	487	
S496	N-496	408	
S497	N-497	488	
S498	N-498	489	
S499	N-499	409	

200.2 Faculty of Commerce and Administration

NOTE A **The use of this note after certain course descriptions indicates, that there exists an equivalent course and that students who have the equivalent course may not take the listed course for credits. To find out the equivalents to the listed course refer to the index below.**

NOTE C **The use of this note after certain course descriptions indicates, that with the permission of the Department a student may take the listed course twice for credits, provided that a different subject is dealt with the second time.**

Course	Old Numbers and Equivalents		
Accountancy			
C213	N-213	211	313A/B, 300
C214	N-214	211	315B, 300
C217			411A/B, 400, 402
C218	N-216	Man 411, Fin 416	413B, 402
C220 (120)			320Z
C221 (121)			320Z
C323	N-313	411	415B, 400
C324			417A, 498
C325	N-314	412	419B, 408
C403			503A
C407			507B
C414			511B
C421	N-421		
C422	N-422		
C425	N-215, N-315	Man 411, Fin 416	
C429			517A, 508
C432	N-432	431	519B, 508
C433	N-433	431	
C441	N-441	Com Law 441	513A/B, 504
C442			515B, 504
C451	N-451		(Computer Auditing New Name)
C461	N-461		509A
C470			560Z
C471			560Z
Administration			
C201 (101)	N-201		312Z
C202 (102)	N-202		312Z
C350			515B
Finance			
C215	N-215	315, 413	407A/B, 408
C314	N-314	413	409B, 408
C315	N-315	413	
C417	N-417		
C418	N-418		
C430	N-430	424	
C431	N-431	424	
C440	N-440	423, 426	541B
C441	N-441	423, 426	
C452	N-450	423, 427	530Z
C453	N-450	423	530Z
C455	N-455	427	
C460	N-460	429	
C461	N-461	429	
Management			
C211	N-211	Com Law 211	
C213	N-213	Psyc 011, 211	
C214	N-214	Soc 211	
C215	N-215		413A/B, 414
C313			415B, 414
C315			
C340	N-340	430	
C341	N-341	430	
C345	N-345	421	470Z
C346	N-346	421	470Z
C368	N-368	451	503B
C369	N-369	451	
C401			501A
C405			505B
C407			507A
C409			509B
C460	N-460	453	511B
C461	N-461	453	
C462	N-462	432	
C463	N-463	432	
C464	N-464	433	
C465	N-465	433	
C466	N-466	452	
C467	N-467	452	
C475	N-475	211	502Z
C476	N-476	211	502Z
C499			560Z
Marketing			
C213	N-213	211, 411, 421	419A/B, 320
C350	N-350	211, 411, 421	421B, 320
C352	N-352	431	
C402	N-402	412, 451	551B
C403	N-403	431	
C452	N-342	412, 451	
C453	N-453	221, 222, 431	523B
C454	N-454	414, 461	521A
C462	N-462		
C463	N-463	481	
C464	N-464		
C485	N-485		

Course	Old Numbers and Equivalents		
C490	N-490		
C491	N-491		
Quantitative Methods			
C208 (108)			300Z, Math 310
C209 (109)			300Z, Math 310
C243	N-243	242, Math 241, Stat 242	308Z
C244	N-244	242, Stat 242	308Z
C313	N-313	411, QA 411	518Z
C314	N-314	411, QA 411	518Z
C353	N-353	Math 415	
C354	N-354	Math 415	
C415	N-415	412	
C423	N-423	421	
C424	N-424	421	
C425	N-425	422	
C426	N-426	422	
C433	N-433		
C445	N-445	442	
C446	N-446	442	

Course	Old Numbers and Equivalents

200.3 Faculty of Fine Arts

NOTE A The use of this note after certain course descriptions indicates that there exists an equivalent course and that students who have the equivalent course may not take the listed course for credit. To find out the equivalents to the listed course refer to the index below.

NOTE C The use of this note after certain course descriptions indicates that with the permission of the Section a student may take the listed course twice for credit, provided that a different content is dealt with the second time.

Course	Old Numbers and Equivalents		
Division of Visual Arts			
STUDIO ARTS			
Art			
C200	N-331, N-332		300, 301
C430	N-430	452	
C432	N-432		
C434	N-433, N-434	433	
C436	N-435, N-436		
C460	N-460	431	
Art Education			
C200	N-251	251	400, 401
C400	N-450	450	
Design			
C200	N-370, N-470	490	320
Drawing			
C200	N-210	410	310, 311
C300	N-400		
C400	N-401		
Graphic Design Art			
C200	N-371, N-372	494	
C250	N-370, N-471	490	
		495	
C300	N-373, N-374	492	
C301	N-472	495	
C400	N-475, N-476	493	
C450	N-473, N-474	491	
Painting			
C200	N-211, N-311	411	333, 434
C300	N-312, N-411	412	435, 536
C400	N-412, N-413	414	
C450	N-414		
Photography			
C201	N-338		
C301	N-438		
Printmaking			
C200	N-381, N-382	281	451
C300	N-481, N-482	481	
C400	N-483, N-484	482	

Course	Old Numbers and Equivalents		
Sculpture			
C200	N-321, N-322	221	340, 441
C300	N-421, N-422	421	542
C400	N-423, N-424	422	
Art History	**Art**		
C240	N-240	240	390
C338	N-341	241	499
C339	N-341	241	499
C342	N-342	242	493, 494, 495
C343	N-343	243	496
C345	N-345	245	
C444	N-444	444	491
C471	N-448	448	
C472	N-449	449	
C480	N-447	447	
C490	N-450		
Cinema	**Cinema Moving Pictures**		
C211	N-211	257	
C212	N-212	258	
C311	N-311	211	
C312	N-312	212	
C437		431	
Division of Performing Arts			
Theatre	**Theatre Arts**	**Theatre Arts**	**Drama**
C201 (281)			301
C300	N-247	247	
C301			351
C310			491
C320	N-340	440	
C401			431
C402			531
C403			561
C404			591
Drama in Education	**Theatre Arts**	**Theatre Arts**	**Drama**
C200	N-331	231	523
C300	N-431	431	573

Course	Old Numbers and Equivalents		
Theatre Performance			
C201 }			341
C202 }			
C203 }	N-421	421	441
C204 }			
C305			541
Production			
C201			401
C301			451
C302			501
C303			553
C304			421
C305			471
C401			551
Scenography			
C200	N-212	212	
C201			311
C202			363
C300	N-312	412	
C301			415
C302			465
C320	N-315	215	
C401	N-413	413	

Course	Old Numbers and Equivalents
Music	
C221	C211
C222	C212
C223	C233
C230	C232
C330	C332
C430	C432

Course	Old Numbers and Equivalents
Contemporary Music Studies	**Music**
C300	N-338
C401	N-481
C402	N-482
C411	N-485
C412	N-486
C413	N-487
C414	N-488

Course	Old Numbers and Equivalents
Integrative Music Studies	
C200	N-235
C300	N-335
C310	N-321
C321	N-351
C322	N-352
C331	N-449
C332	N-450
C400	N-435
C411	N-353
C412	N-354
C421	N-355
C422	N-356
C431	N-451
C432	N-452

Course	Old Numbers and Equivalents
Music History	
C200	N-245
C401	N-468
C402	N-469

Course	Old Numbers and Equivalents
Music in Education	
C300	N-421
C431	N-475
C432	N-476

Course	Old Numbers and Equivalents
Music Performance Studies	
C201	N-201
C301	N-301
C302	N-302
C311	N-336
C312	N-337
C321	N-436
C322	N-437
C411	N-339
C412	N-340
C421	N-438
C422	N-439
C431	N-465
C432	N-466
C433	N-467
C434	N-470

Course	Old Numbers and Equivalents
World Music	**Music**
C300	N-345
C310	N-343
C320	N-360
C330	N-370
C340	N-380

200.4 Sir George Williams Faculty of Science

NOTE A The use of this note after certain course descriptions indicates, that there exists an equivalent course and that students who have the equivalent course may not take the listed course for credits. To find out the equivalents to the listed course refer to the index below.

NOTE C The use of this note after certain course descriptions indicates, that with the permission of the Department a student may take the listed course twice for credits, provided that a different subject is dealt with the second time.

Course	Old Numbers and Equivalents	
Chemistry		
N-201	101	101, CEGEP 101
N-202	102	102, CEGEP 201
N-211	412	
N-213	413	
N-221	411	
N-222		N-221
N-223		N-221
N-231	421	
N-233	433	N-231
N-241	431	
N-281	461	
N-301	401	
N-311	417	
N-321	415	N-323
N-322	418	N-321
N-323	419	N-321
N-331	427	
N-336	471	
N-337	473	
N-338	472	
N-341	432	
N-342	436	N-341
N-343	437	N-341
N-346	474	
N-350		N-353
N-351	440	
N-352	449	N-351
N-353	490	
N-354	499	N-353
N-371	441	
N-382	462	
N-383	463	
N-431	428	
N-441	433	N-442, N-443
N-442	434	N-441
N-443	435	N-441
N-451	491	N-452, N-453
N-452	492	N-451
N-453	493	N-451
N-461	416	N-462, N-463
N-462		N-461
N-463		N-461
N-471	443	
N-472	444	
N-491	450	
Biology		
N-201	251	101, CEGEP 301
N-202	252	102, CEGEP 401
N-203	253	Zoo N-210, N-211
N-204	254	
N-213	453	
N-224	444	
N-241	241	
N-253	428	N-250, Bot 414
N-254	429	N-250, Bot 414
N-255	242	
N-312		Bot N-313, N-312, 422, Zoo N-313, 453, N-316
N-314	454	
N-343	445	N-342, 442
N-344	446	N-342, 442
N-360	460	
N-372	481	N-371, 481
N-373	484	N-371, 481
N-380	482	
N-381	483	
N-416	456	
N-433	443	
N-434	434	
N-435	435	
N-445	447	
N-446	448	
N-490	491	
Botany		
N-210	430	
N-213	421	
N-215	434	411
N-216	435	N-212, 415
N-231	410	N-230, 412
N-311		411
N-320	431	413
N-360	432	413
N-422	418	
Geology		
N-215	211	N-211, N-213
	213	N-214, 115,
	214	CEGEP 901,
	215	CE N-431
N-216	211	N-211, N-213
	213	N-214, 115
	214	CEGEP 901,
	215	CE N-431
N-220	223	N-420
N-231	221	131
N-232	222	

Course	Old Numbers and Equivalents	
N-245	245	
N-246	446	N-348, 428, N-351, 421, N-346
N-322	424	N-321, 212, 012
N-323	425	N-321, 212, 012
N-342	426	N-341, 411
N-349	429	N-351, 421
N-352	422	
N-353	423	
N-370	470	Chem N-211
N-421	430	
N-455	455	N-460, 440
N-456	456	N-460, 440
N-461	441	
N-462	442	

Mathematics

N-200		100
N-201	223	101
N-202	213, 251	102, CEGEP 101
N-203	251, 451	103, CEGEP 103
N-204	431	104, CEGEP 105
N-205	451	105, CEGEP 203
N-206	411	N-281, 106
N-207	440	N-241, 107 Biol N-380
N-208		N-202
N-209		N-203
N-210		
N-241	440	
N-270	452	N-271, N-371, N-372, N-373
N-281		N-280
N-290		N-202, N-292
N-291		N-292
N-292	411	N-290, N-291
N-372	452	N-271
N-373	452	N-371
N-409		Comp Sc N-211
N-472		Engin. N-571
N-473		Engin. 614

Physics

N-204	211	104, CEGEP 101
N-205	211	105, CEGEP 201
N-206		106, CEGEP 301
N-210	210	110
N-224		124, CEGEP 101
N-225		125, CEGEP 201
N-226		126, CEGEP 301
N-241		N-242
N-243		N-241, N-242
N-244		N-241, N-242
N-251		N-252
N-291		N-242
N-292		N-252
N-295		N-354, N-395
N-336	471	
N-345	441	
N-352		N-353
N-355		N-354
N-364		N-365
N-392		N-353
N-394		N-365
N-433		N-434
N-457	451	
N-465		N-466
N-467		
N-477		
N-478		
N-480		N-481
N-493		N-434
N-495		N-466
N-496	491	

Course	Old Numbers and Equivalents	

Zoology

N-212		N-210, 421
N-213	424	
N-214	425	
N-215	422	N-211, 422
N-320	431	
N-331	473	N-330
N-332	474	N-330
N-361	462	
N-422	432	N-421, 432

200.5 Loyola Faculty of Arts and Science

NOTE A **The use of this note after certain course descriptions indicates that there exists an equivalent course and that students who have the equivalent course may not take the listed course for credit. To find out the equivalents to the listed course refer to the index below.**

Course	Old Numbers and Equivalents	
Andragogy		
L200	300Z	
L201	331A/B	
L209	361A/B	
L301	411A/B	
L303	401A/B	
L309	321A/B	
L320	420Z	
L400	500Z	
L401	421A/B	
L408	441Z	
L421	521A/B	
Bio-Physical Education		
L201	301A	
L211	311A	
L213	313B	
L241	341B	
L251	391A	
L261	361Y	
L310	410Z	
L331	431A	
L333	433B	
L335	435B	
L342	442Z	
L351	451A	
L353	453A	
L355	455B	
L357	457B	
L370	470Z	
L393	497A	
L397	499B	
L401	501A	
L411	511A	
L412	512Z	
L413	514A	497A (1975-76)
L415	515B	499B (1975-76)
L421	521A	
L426	526Z	
L433	437A/B	
L436	536Z	
L451	551B	
L453	553A	
L455	531B	
L462	562Z	
L464	564Z	
L466	566Z	
L468	568Z	
L470	570Z	
L472	670Z	
L480	630Z	
L481	513B	
L482	632Z	
L483	533A	
L484	640Z	
L486	642Z	
L488	534Z	
L490	590Z	
L493	597A	
L497	599B	
Chemistry		
210Z	112Z	
425A, 427B	427Z	
445A, 447B	545A/B	
491A, 493B	490Z	
Classics		
L211	311A	
L212	313B	
L220	384Z	
L222	321B	
L224, L225	372Z	
L230, L231	340Z	
L240, L241	330Z	
L344	430Z	
L346	436Z	
L448	432Z	
L449	433Z	
L250, L251	324Z	
L252, L253	374A, B, Z	
L254	386Z	
L256	382Z	
L260	376Z	
L262	373A	
L264, L265	434Z	
L266	331A	
L268, L269	435Z	
L280	350Z	

Course	Old Numbers and Equivalents
L380	450Z
L480	550Z
L482	552Z
L484	554Z
L486	556Z
L488	558Z
L290	390Z
L390	490Z
L392	492Z
L490	590Z
L491	591Z
L492	592Z
L494	594Z
L496	596Z
L498	598Z
L270	360Z
L272	462Z
L370	460Z
L470	560Z
Communication Studies	
L205	301A/B
L255	303A/B
L275	305A/B
L278	307A/B
L281, L287	308Z
L300	400A/B
L301	401A/B
L302	402A/B
L303	403A/B
L304	420Z
L305	438Z
L306	443A
L307	445A-01
L308	445A-02
L309	445A-03
L310	445A-04
L311	445A-05
L312	445B-06
L313	445B-07
L314	445B-08
L315	445B-09
L316	445B-10
L330	440Z
L331	443B
L350	449Y
L360	421A
L361	441A
L362	423B
L363	424Z
L375	460Z
L378	462Z
L381	464Z-01, 02
L384	464Z-03, 04
L387	468Z
L417	527A/B
L435	525A
L436	524Z
L437	541B
L440	536A/B
L441	537A/B
L442	538A/B
L443	539A/B
L451	543Y
L452	561Y
L465	532Z
L466	530Z
L467	528Z
L468	544Z
L481	580Z-01, 02, 03
L487	580Z-04
L495	580Z-05, 06
Economics	
L202	302Z

Course	Old Numbers and Equivalents
L209, L210	300Z
L304	304Z
L307	307B
L309	309A/B
L311	311A/B
L322	322Z
L333	333A/B
L338	338Z
L401	401A
L402	502Z
L403	403B
L404	404Z
L405	405B
L407	407A
L411	411A/B
L413	563B
L414	504Z
L418	538Z
L434	434Z
L436	536Z
L438	438Z
L440	540Z
L445	545A/B
L447	507A
L448	448Z
L449	509B
L451	611A
L455	655B
L462	662Z
L465	665A
L467	667B
L471	671A
L481	681B
L491	691
English	
L200	101Z
L204	301Z
L205	301A/B
L206	302Z
L208	304Z
L210	310Z
L212	306Z
L214	308Z
L216	352Z
L218	334Z
L220	336Z
L223	323A
L225	325B
L233	333A
L235	335B
L236	363Z
L237	337A
L239	339B
L240	340Z
L241	341Z
L244	318Z
L246	346Z
L248	348Z
L250	350Z
L252	326Z
L254	328Z, 332Z
L256	331Z
L260	360Z
L262	362Z
L264	364Z
L270	370Z
L272	312Z
L280	307Z
L300	400Z
L301	400A/B
L302	402Z
L303	403A/B
L304	404Z
L305	405A/B
L307	401A/B

Course	Old Numbers and Equivalents
L309	461A/B
L311	303A/B
L313	305A/B
L342	446Z
L341	319A
L342	446Z
L343	321B
L346	448Z
L345	445A
L346	448Z
L347	447B
L352	454Z
L355	355A
L357	357B
L364	452Z
L363	453A
L364	452Z
L365	455B
L400	408Z
L402	501Z
L405	503B
L407	409A/B
L409	411A/B
L410	412Z
L412	410Z
L413	413A
L415	415B
L417	417A/B
L418	418Z
L420	406Z
L424	424Z
L425	425A/B
L426	426Z
L427	427A/B
L434	432Z
L433	433A
L434	432Z
L435	435B
L438	436Z
L437	437A
L439	439B
L442	440Z
L443	443B
L446	342Z
L450	459Z
L454	343Z
L472	450Z
L474	502Z
L475	505A
L477	507B
L481	423A/B
L483	449A/B
L485	451A/B
L487	456A/B
L489	457A/B
L490	590Z
L492	592Z
L494	580Z
L496	500Z
French (Language)	
L200	300Z/F/S, 600Z
L201	301Z/F/S, 602Z/F/S
L202	302Z/F/S, 604Z
L319, L320	319Z, 616Z
L352	337Z, 636Z
L448	538Z
French (Literature)	
L210	310Z
L211	312A
L213	501A
L215	503B
L241	341A
L243	343B
L245	345A
L247	347B
L259	359A
L261	361B
L263	363A
L265	365B
L267	367A
L269	369B
L321	421A
L323	423B
L325	425B
L351	431A
L353	433B
L355	435B
L396	396Z, 596Z
L430	532Z
L431	535A
L433	537B
L439	539A
L441	541A
L443	543B
L445	545B
L447	547B
L449	549B
L451	551Y
L452	452Z
L453	553B
L462	552Z
L471	571A
L473	573B
L475	575A
L477	577B
L480	638Z
L482	642Z
L498	598Z
Geography	
L200	300Z
L215	331A
L216	333B
L265	301A
L266	303B
L275	311A
L276	313B
L315	481A
L317	483B
L325	471A
L326	473B
L335	421A
L336	423B
L342	420Z
L344	440Z
L347	430Z
L348	450Z
L349	460Z
L358	411A
L359	413B
L365	491A
L375	400Z
L395	493B
Health Education	
NURS L213, NURS L325	NURS 300Z
NURS L301	NURS 401A
NURS L307	NURS 407B
NURS L320	NURS 320Z
NURS L323	NURS 513A/B
NURS L324	NURS 310Z
NURS L430	NURS 330Z
NURS L431	HEAL 301A
NURS L432	NURS 504Z
NURS L433, HEAL L331	HEAL 430Z
NURS L437	HEAL 405
HEAL L201	HEAL 307
HEAL L206	HEAL 300Z
HEAL L208	COSE 300Z

Course	Old Numbers and Equivalents
HEAL L209	HEAL 421A
HEAL L212	HEAL 400Z
HEAL L251	HEAL 351
HEAL L261	HEAL 361
HEAL L270	HEAL 370
HEAL L303	HEAL 403B
HEAL L319	COSE 401A/B
HEAL L320	COSE 320Z
HEAL L323	COSE 513A
HEAL L331 / NURS L433	HEAL 430Z
HEAL L401	HEAL 501B
HEAL L403	HEAL 503B
HEAL L408	COSE 408Z
HEAL L410	HEAL 510Z
HEAL L418	COSE 310Z
HEAL L472	HEAL 372S

History

L200	301A/B
L203	303A
L205	305B
L206	306Z
L207	307A/B
L208	308Z
L211	311A
L213	313B
L219 / L221	322Z
L223 / L225	320Z
L227 / L229	324Z
L230	330Z
L235	335A
L237	337B
L240	340Z
L250	350Z
L254	354Z
L258	358Z
L264	364Z
L266	366Z
L268	368Z
L272	372Z
L273	373A
L275	375B
L278	378Z
L280	380Z
L281	381A
L283	383B
L291	391Z
L302	402Z
L303	403A
L304	404Z
L305	405B
L307	407A
L309	409B
L310	410Z
L311	411A
L313	413B
L316	416Z
L317	417A
L319	419B
L324	424Z
L330	430Z
L331	431A
L333	433B
L346	446Z
L350	450Z
L351 / L353	452Z
L355	455A/B
L358*	454Z*
L359*	456Z*
L361*	360Z*
L363*	362Z*
L364	462Z

Course	Old Numbers and Equivalents
L371	471A
L373	473B
L390	490Z
L392	492Z
L397	497A
L399	499B
L402	502Z
L404	504Z
L406	506Z
L408	508Z
L410	510Z
L420	520Z
L422	522Z
L430	530Z
L442	542Z
L444	544Z
L446	546Z
L450	550Z
L452	552Z
L454	554Z
L460	560Z
L462	562Z
L464	564Z
L470	570Z
L472	572Z
L476	576Z
L490	590Z
L492	592Z
L493	593Z
L495	594Z
L496	596Z
L498	598Z

**NOTE: Content for these courses are similar, although credit weight differs. Students may not receive credits for both courses.*

Interdisciplinary Studies

L204	304Z
L212	312Z
L220	320Z
L221	321A/B
L224	324Z
L226	326Z
L230	330Z
L233	333A/B
L236	336Z
L250	350Z
L264	364Z
L270	370Z
L272	372Z
L290	390Z
L300	400Z
L307	407A
L309	409B
L311	411A
L313	413B
L314 / L315	410Z
L321	421A
L323	423B
L331	431A
L333	433B
L350	450Z
L351	451A
L353	453B
L360	460Z
L361	461A
L363	463B
L391	491A
L393	493B
L411	511A
L413	513B
L420	520Z
L441 / L442	540Z
L450	550Z

Course	Old Numbers and Equivalents
L460	560Z
L491	591A
L493	593B
Library Studies	
L201	301A/B
L202	302A/B
L303	403A/B
L305	405A/B
L320	320A/B
L325	325A/B
L331	431A/B
L333	433A/B
L345	445A/B
L374	474A
L376	475B
L407	507A/B
L411	511A/B
L421	521A/B
L432	532A/B
L435	535A/B
L441	541A/B
L451	551A/B
L461	561A/B
L465	565A
L466	566B
L478	578A
L480	579B
L495	567A/B
Mathematics	
213A/B	109A/B
214A/B	111A/B
215A/B	133A/B 135A/B
216A/B	135A/B 233A/B
217A/B	231A/B
200A/B 202A/B	300Z
341A/B 343A/B	340Z
501A/B 503A/B	502Z
Department of Modern Languages and Linguistics	
German	
L200 L201	300Z
L202 L203	302Z, 302S
L206 L207	306Z
L208 L209	308Z
L264	364Z
L270 L271	370Z
L276 L277	376Z
L320 L321	420Z
L350 L351	540Z
L380 L381	560Z
L400 L401	410Z
L430 L431	530Z
L450 L451	570Z
L470 L471	575Z
L480 L481	580Z
Italian	
L200 L201	300Z
L202 L203	302Z, 302S
L210 L211	308Z
L220 L221	306Z
L250 L251	370Z
L260 L261	376Z
L300 L301	316Z
L310 L311	320Z
L320 L321	470Z
L330 L331	440Z
L340 L341	500Z
L350 L351	510Z
L360 L361	520Z
L370 L371	400Z
L380 L381	410Z
L390 L391	420Z
L400 L401	570Z
L410	580Z
Russian	
L200 L201	300Z
L208 L209	308Z
Spanish	
L200 L201	300Z
L202 L203	302Z, 302S
L206 L207	306Z
L208 L209	308Z
L270 L271	370Z
L276 L277	376Z
L300 L301	316Z
L310 L311	400Z
L320 L321	470Z
L400 L401	500Z
L410 L411	510Z
L420 L421	410Z
L430 L431	530Z
L440 L441	420Z

Course	Old Numbers and Equivalents
L450, L451	550Z
L480, L481	580Z
Linguistics	
L200, L201	300Z
L210, L211	310Z
L250, L251	350Z
L300, L301	400Z
L320, L321	420Z
L330, L331	430Z
L350, L351	450Z
L360, L361	460Z
L370, L371	470Z
L400, L401	500Z
L410, L411	510Z
Philosophy	
L202	302Z
L204	304Z, 360Z
L206	361A
L208	363B
L210	308Z, 372Z
L212	310Z
L214	320Z
L322	322Z
L326	326Z
L328	364Z
L330	331Z
L340	374Z
L350	378Z
L360	380Z
L375	382Z
L385	398Z
L390	396Z
L400	410Z
L410	420Z
L420	430Z
L430	440Z
L440	502Z
L450	504Z
L455	394Z
L460	350Z
L470	340Z
L475	381Z
L480	400Z
L491, L492	510Z
Physics	
201Z	101Z
203A	103A
Political Science	
L200	300Z
L210	310Z
L220	320Z
L221	321A
L240	340Z
L251	351B
L261	361A
L263	363B
L291	391A
L293	393B
L307	407A
L309	409B
L311	411A
L313	413B
L320	420Z
L324	424Z
L328	428Z
L331	431A
L333	433B
L341	441A
L343	443B
L346	446Z
L350	450Z
L355	455A
L357	457B
L371	371A
L373	373B
L380	480Z
L391	491A
L393	493B
L410	510Z
L420	520Z
L424	524Z
L430	530Z
L434	534Z
L440	540Z
L442	542Z
L444	544Z
L450	550Z
L460	560Z
L470	570Z
L480	580Z
L491, L493	590Z
L499	599A/B
Psychology	
L200	200Z
L202	300Z
L203	301B
L204	302Z
L205	303A
L206	304Z
L208	306Z
L210	308Z
L212	310Z
L213	311A
L215	313A
L300	400Z
L301	401A
L302	402Z
L303	403B
L304	404Z
L305	405A/B
L306	406Z
L307	407A/B
L308	408Z
L309	409A/B
L310	410Z
L312	412Z
L313	413B
L314	414Z
L315	415B
L317	417A
L319	419B
L321/L323	421A/B, 423A/B
L400	500Z
L402	502Z
L404	504Z
L406	506Z
L408	508Z
L421/L423	521A/B, 523A/B
Sociology	
L201	301A/B
L202	302Z
L203	303B

Course	Old Numbers and Equivalents
L204	304Z
L205	305B
L206	306Z
L207, L209	308Z
L211*	312Z*
L213*	406Z*
L214	314Z
L300	400Z
L302	402Z
L304	404Z
L310	410Z
L316	416A
L318	418B
L320	420Z
L321	421A
L323	423B
L325	425A
L327	427B
L330	430Z
L350	450Z
L360	460A/B
L400	500Z
L402	502Z
L403*	408Z*
L404	504Z
L406	506Z
L421	521A
L423	523B
L450	550Z
L458	558Z
L460	560A/B
L462	562Z

**NOTE: The content of these courses are similar, although credit weight differs. Students may not receive credits for both courses.*

Theological Studies

L200, L202 (1st time registration)	300Z
L201, L203 (repeat registration)	300Z
L204	301A
L205	302B
L206	303Z
L210	310Z
L211	311Z
L213	313Z
L215	315Z
L216	316A/B
L217	317A/B
L218	318A/B
L219	319Z
L221	321A/B
L224	324Z
L225	325Z
L231	331A
L232	332B
L237	337Z
L240	340A
L241	341B
L255	355Z
L261	361Z
L264	364A
L265	365B
L270	370Z
L277	377Z
L279	379Z
L280	380A
L281	381B
L285	385Z
L287	387Z

Course	Old Numbers and Equivalents
L293	393Z
L298	398A
L299	399B
L300	400Z
L301, L302	400Z
L310	410Z
L311, L312	410Z
L330	430Z
L350	450Z
L351, L352	450Z
L370	470Z
L372	472Z
L400, L402 (1st time registration)	500Z
L401, L403 (repeat registration)	500Z
L405, L406	501Z
L407	503A
L408	504B
L411	511A
L412	512B
L414	514Z
L416	516Z
L418	518Z
L431	531Z
L432	532Z
L438	538Z
L440	540Z
L442	542A
L443	543B
L444	544A
L445	545B
L451	551A
L452	552B
L461	561A
L462	562B
L463	563A
L464	564B
L465	565Z
L467	567Z
L468	568A
L469	569B
L499	599Z

200.6 Faculty of Engineering

NOTE A **The use of this note after certain course descriptions indicates, that there exists an equivalent course and that students who have the equivalent course may not take the listed course for credits. To find out the equivalents to the listed course refer to the index below.**

Course	Old Numbers and Equivalents	
Engineering Mathematics		
C212	N-312	
C232	N-332	
C252	N-352	
C271	N-371	
C311	N-411	
C312	N-412	
C391	N-491	
Engineering		
C211	N-211	
C221	N-221	
C242	N-242 }	N-241
C243	N-243 }	
C244	N-341	
C251	N-351	
C273	N-373	N-372
C274	N-374	N-371
C341	N-441	
C361	N-361	
C362	N-461	
C372	N-472	
C401	N-501	
C410	N-510	
C411	N-511	
C412	N-512	
C471	N-571	
C472	N-572	
C473	N-573	
C474	N-574	
C481	N-581	
C482	N-582	
C483	N-583	
C484	N-584	
C485	N-585	
C486	N-586	
Civil Engineering		
C321	N-421	
C331	N-431	
C341	N-441	
C353	N-454	N-452
C354	N-453	N-451
C371	N-471	
C372	N-472	
C381	N-481	N-461
C411	N-511	
C412	N-512	
C431	N-531	
C434	N-534	N-533
C435	N-535	N-532
C452	N-552	
C453	N-553	
C454	N-554	
C455	N-555	N-551
C456	Engin. N-541	
C471	N-571	
C472	N-572	
C473	N-573	
C481	N-581	
C482	N-582	
C483	N-583	
C484	N-584	N-562
C485	N-585	N-561
C491	N-591	
Electrical Engineering		
C251	C-351	
C311	N-411	
C312	N-412	
C316	N-416	
C321	N-421	
C331	N-431	
C333	N-433	
C334	N-434	
C341	N-441	
C351	N-451	
C401	N-501	
C411	N-511	
C413	N-513	
C414	N-514	
C415	N-515	
C416	N-516	
C421	N-521	
C422	N-522	
C431	N-531	
C433	N-533	
C441	N-541	
C442	N-542	
C453	N-553	
C454	N-554	
C461	N-561	
C462	N-562	
C481	N-581	
C482	N-582	
Mechanical Engineering		
C311	N-411	
C312	Engin. N-212	

Course	Old Numbers and Equivalents	
C321	N-321	
C341	N-441	
C342	N-442	
C351	N-451	
C352	N-452	
C373	Engin. N-473	
C411	N-511	
C421	N-521	
C423	N-423	
C441	N-541	
C443	N-543	
C445	N-545	
C452	N-552	
C453	N-553	
C455	N-555	
C461	N-561	
C462	N-562	
C463	N-563	
C471	N-571	
C481	N-581	
Computer Science		
S211	N-211,	111, CEGEP Data Processing 901 or 911
S216	N-310	
S221	N-221	
S231	N-220	
S241	N-223	
S251	N-222	QUAN C-423
S322	N-301	
S323	N-340	
S325	N-430	
S342	N-303	
S352	N-312	
S361	N-320	
S426	N-431	
S435	N-404	
S436	N-421	
S443	N-302	
S445	N-440	
S453	N-413	
S455	N-311	
S456	N-414	
S471	N-405	
S475	N-450	
S491	N-491	
Quality Control		
C200	E-900	
C201	E-901	
C202	E-902	
C203	E-903	
C204	E-904	
C205	E-905	
C206	E-906	
C207	E-907	
C208	E-908	MANA C-345

Course	Old Numbers and Equivalents

Index

Academic: *Regulations, 16;/Calendar, 11*

Accountancy: *Special Programmes in, 61.4; 61.13*

Administration: *61.5; Bachelor of, 61.2.4; Officers of, 12.1.10*

Admission Requirements: *General, 13; for individual faculties: Arts (SGW), 41; Arts and Science (Loy), 51; Commerce and Administration, 61; Engineering, 71; Fine Arts, 81; Science (SGW), 91; see also Department concerned.*

Aegrotat standing: *(Loy) 16.4.1*

Alumni: *(Loy) 19.1.3; (SGW) 19.1.6*

Andragogy: *(Loy) 51.3*

Anthropology: *(SGW) 41.21.4*

Appeals: *(Loy) 16.4.1; (SGW) Academic Reevaluation, 16.4.2*

Applied Social Science: *(SGW) 41.14*

Art Education: *81.7; Diploma in, 81.3.5*

Art History: *81.8;/and Studio Art, 81.4.*

Arts, Bachelor of: *(Loy) Faculty of Arts and Science, 51; (SGW) Faculty of Arts, 41.*

Asian Studies: *(SGW) 41.5.3*

Athletics: *18.1*

Awards: *(Loy) 17.1.1, 17.1.2; (SGW) 17.2.1; 17.2.2*

Biological Sciences: *(SGW) 91.6*

Biology: *(Loy) 51.4*

Bio-Physical Education: *(Loy) 51.5*

Bookstore: *(SGW) 18.6.6*

Botany: *(Loy) 51.4; (SGW) 91.6.1*

Bursaries: *(Loy) 18.3.2; (SGW) 18.3.3*

Campus Centre: *(Loy) 18.4.10*

Canada Manpower Centre: *(Loy) 18.4.8; (SGW) 18.2.4*

Canadian Studies: *(Loy) 51.17.1; (SGW) 41.5.4*

Certificates: *regulations concerning, 16.2.12; /offered: Andragogy, 51.3; Bio-Physical Education, 51.5; Community Nursing, 51.15; Community Service, 41.14; Creative Drama and Theatre Arts, 81.10; Education, 41.16; Etudes françaises, 51.12; Family Life Education, 41.14; Health Education, 51.15; Library Studies, 51.18; Mathematics for Teachers, 91.12; Outdoor Education, 51.5; Quality Control, 71.9; Scientific Measurement, 91.6, 91.7, 91.13; Teaching English as a Second Language, 41.6; Teaching of Science, 91.15*

Chaplains: *(Loy) Belmore House, 18.4.7; (SGW) 18.6.8*

Cheating: *(Loy) 16.4.1; Conduct during Examinations (SGW) 16.4.2*

Chemistry: *(Loy) 51.6; (SGW) 91.7*

Child Care: *18.6.4*

Cinema: *81.9*

Civil Engineering: *71.4*

Classics: *(Loy) 51.7; (SGW) 41.8*

Commerce, Bachelor of: *see Faculty of Commerce and Administration, 61*

Communication Studies: *(Loy) 51.8*

Community Nursing: *see under Health Education*

Community Service: *see under Applied Social Science*

Computer Science: *71; (Loy) 51.9; (SGW) 91.8; Bachelor of, 71.8 (SGW only)*

Concentration Requirements: *16.2.3 (Academic Regulations) and individual Faculty concerned*

Continuing Education: *Centre for 20*

Counselling: *18.2*

Courses: *Cancellation of, 15.3; Graded 'incomplete', 16.4.2; Required, see individual department or faculty concerned; Repeating of, 16.4.2; Withdrawl, 15.3*

Creative Drama and Theatre Arts: *see under Drama.*

Credit: *Definition of, 16.1.2; Extended, 16.3.5; External, 16.4.1; Transfer of, 13.7.*

Curriculum: *Regulations, 16.2.2; Obligations, 16.2.1*

Double Major: *16.2.9 (Academic Regulations)*

Double Minor: *16.2.10 (Academic Regulations)*

Drama: *81.10*

Economics: *61.10; (Loy) 51.10; (SGW) 41.15, 91.9.*

Education: *(SGW) 41.16; Outdoor Education, see Bio-Physical Education; Teaching of English as Second Language, 41.6*

Electrical Engineering: *71.5*

Engineering: *Bachelor of, 71; Civil, 71.4; Electrical, 71.5; Mechanical, 71.6*

English: *(Loy) 51.11; (SGW) 41.9; Teaching of, as a Second Language, 41.6; Language Proficiency, 13.6.4*

Environmental Science: *(Loy) 51.17.4*

Etudes françaises: *(Loy) 51.12; (SGW) French, 41.10*

Evaluation: *Academic, 16.3.1 (Academic Regulations)*

Examinations: *Conduct during, 16.4.2 (see also Cheating 16.4.1); Special, 16.4.1; Supplemental, 16.4.1, 16.4.2*

Faculty: *Full time, 12.1.11; Part time, 12.1.15; Emeritus, 12.1.12; Research, 12.1.13;/ Councils: Arts, (SGW) 12.1.4; Arts and Science, (Loy) 12.1.3; Commerce and Administration, 12.1.5; Engineering, 12.1.6; Fine Arts, 12.1.7; Science, (SGW) 12.1.8*

Failure: *16.3.5 (Academic Regulations)*

Family Life Education: *see under Applied Social Science*

Fees: *15*

Finance: *61.6*

Financial Aid: *18.3.1; See also Loans, and Bursaries*

Fine Arts: *Bachelor of 81*

Food Services: *(Loy) 18.4.9, 18.4.10; (SGW) 18.6.7*

Foreign Students: *Admission of 13.4.3, 13.4.4, 13.4.5; Student Services (Loy) 18.4.5; (SGW) 18.6.3*

French: *(SGW) 41.10; (Loy) Etudes françaises, 51.12*

Geography: *(Loy) 51.13; (SGW) 41.17, 91.10*

Geology: *(Loy) 51.14; (SGW) 91.11*

Governors: *Board of, 12.1.1*

Grading: *Procedures, 16.3.3; Special cases, 16.3.3; System, 16.3.3*

Graduation: *16.1.6 (Academic Regulations)*

Graphic Design: *81.4; see also Studio Arts*

Guidance: *18.2*

Health Education: *(Loy) 51.15*

Health Services: *(Loy) 18.4.6; (SGW) 18.6.5*

History: *(Loy) 51.16; (SGW) 41.18*

Honours: *New/regulations: 16.2.4; Old/regulations: 16.2.5*

Housing: *(Loy) 18.4.9; (SGW) 18.6.2*

Independent Students: *Admission of; 13.9; Academic regulations re; 16.4.2*

Independent Studies: *16.4.1*

Interdisciplinary Studies: *Centre for, (Loy) 51.17; (SGW) 41.5;/Courses, (Loy) 51.17.9; (SGW) 41.5.2*

January Admission: *13.5.2*

Journalism: *(SGW) 41.7*

Lacolle Centre: *18.5*

Legal Aid: *(Loy) 18.4.11; (SGW) 18.6.2*

Librarians: *12.1.14*

Library Studies: *(Loy) 51.18*

Linguistics: *see under Modern Languages*

Loans: *(Loy) 18.3.2; (SGW) 18.3.3*

Major: *16.2.7 (Academic Regulations); /minor programmes, 16.2.11*

Management: *61.7*

Marketing: *61.8*

Mathematics: *(Loy) 51.19; (SGW) 41.11, 91.12; /for Teachers, 91.12*

Mature Student: *Programmes, 14; Admission and Definition of 13.8*

Mechanical Engineering: *71.6*

Medals: *(Loy) 17.1.1; (SGW) 17.2.1*

Medieval Studies: *(Loy) 51.17.5*

Minor: *16.2.8 (Academic Regulations)*

Modern Languages and Linguistics: *(Loy) 51.20; (SGW) 41.8*

Music: *Activity, (Loy) 18.4.2; Fine Arts Faculty, 81.11*

Ombudsman: *(Loy) 18.7.1; (SGW) 18.7.2*

Outdoor Education: *see under Bio-Physical Education*

Para Academic Activity: *(Loy) 16.4.1*

Philosophy: *(Loy) 51.21; (SGW) 41.12*

Physical Education: *18.1*

Physics: *(Loy) 51.22; (SGW) 91.13*

Plagiarism: *16.4.1, 16.4.2*

Political Science: *(Loy) 51.23; (SGW) 41.19*

Prizes: *(Loy) 17.1.1, 17.1.2; (SGW) 17.2.1, 17.2.2*

Probation Academic: *16.3.5, Failure Regulations (iii)*

Psychology: *(Loy) 51.24; (SGW) 41.20, 91.14.1*

Quality Control: *71.9 (Engineering)*

Quantitative Methods: *61.9*

Recreation and Leisure Studies: *(Loy) 51.17.2*

Re-evaluation: *Academic 16.4.2*

Regulations: *See Academic Regulations*

Religion: *(Loy) Theological Studies, 51.26; (SGW) 41.13*

Residence Requirements: *16.1.5*

Russian Studies: *(SGW) 41.5.6*

Scholarships: *18.3; Concordia Wide, 18.3.1; (Loy) 18.3.2; (SGW) 18.3.3*

Science: *Bachelor of, (Loy) 51; (SGW) 91; Teaching of, 91.15; /and Human Affairs, (SGW) 41.5.5*

Scientific Measurement: *(SGW) Biology option, 91.6; Chemistry option, 91.7; Physics option, 91.13*

Second Bachelor's Degree: *16.1.5 (Academic Regulations)*

Self-Elected Major: *(Loy) 51.17.3*

Senate: *Members of, 12.1.2*

Social Responsibility in Science: *(Loy) 51.17.6*

Sociology: *(Loy) 51.25; (SGW) 41.21*

Specialization: *16.2.6 (Academic Regulations)*

Status, Regulations concerning: *16.1.3*

Student Life: *Concordia Council on, 12.1.9; 18.6*

Student Request Committees: *(SGW) 16.4.2*

Student Services: *(Loy) 18.4; (SGW) 18.6*

Students' Associations: *Day Students, Graduate Students, Loyola Evening Students, Loyola Students, Part-time Students, 19*

Studio Art(s): *81.4, 81.5, 81.6*

Teachers: *Programmes of Particular Interest to, 21*

Teaching of English as a Second Language: *Centre for, (SGW) 41.6*

Teaching of Science: *(SGW) 91.15*

Theatre Arts: *81.10*

Theological Studies: *(Loy) 51.26; (SGW) Religion, 41.13*

Third World Studies: *51.17.7*

Transcripts: *(for Admissions) 13.6.1, 13.6.2*

Transfer Students: *13.7.3 (Admission Regulations)*

Tuition: *15*

Undergraduate Scholars' Programme: *(SGW) 41.5.9*

Urban Studies: *(SGW) 41.5.7*

Withdrawl: *from Courses or University, 15.3*

Women's Studies: *(Loy) 51.17.8; (SGW) 41.5.8*

Zoology: *(Loy) 51.4; (SGW) 91.6*

Concordia Offers Graduate Programs In The Following Fields

Applied Linguistics
Biological Sciences
Chemistry
Commerce & Administration
Communication Studies
Community Politics and the Law
Computer Science
Economics
Education
Civil Engineering
Electrical Engineering
Mechanical Engineering
Building Engineering
English
Fine Arts
History
Humanities
Institutional Administration
Library Science
Mathematics
Philosophy
Physics
Psychology
Religion
Sociology
Sports Administration
Theological Studies

TO OBTAIN A GRADUATE CALENDAR CONTACT:

GRADUATE STUDIES OFFICE
SIR GEORGE WILLIAMS CAMPUS
1455 DE MAISONNEUVE BLVD. W.
MONTREAL, QUEBEC H3G 1M8

TEL: 879-7314

Produced by: the Office of the Vice-Rector and Principal
Edited by: Grendon Haines and Imre Muranyi
Photographs by: Jim MacDonald (except p.238 & 408)

Printed in Canada

JANUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

FEBRUARY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

MARCH

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

APRIL

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

MAY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

JUNE

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

JULY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

AUGUST

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

SEPTEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

OCTOBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

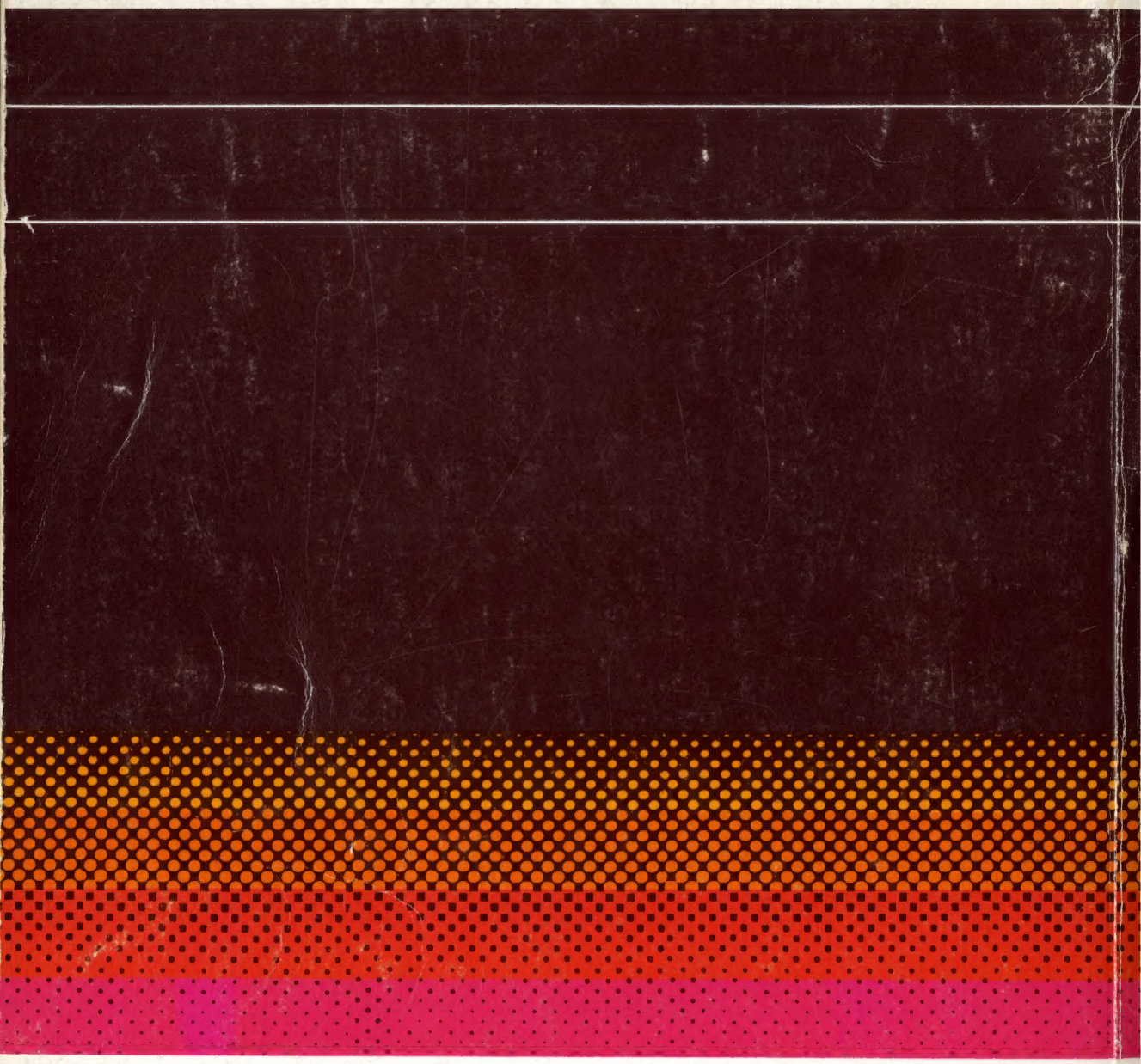
NOVEMBER

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

DECEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

1978



Sir George Williams Campus
1455 de Maisonneuve West
Montreal, Quebec
H3G 1M8

Loyola Campus
7141 Sherbrooke Street West
Montreal, Quebec
H4B 1R6